ENVIRONTMENTAL HEALTH EMERGENCY RESPONSE PLAN

Environmental Health Section

July 15, 2021
Dynamic
Web-Version is Current

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RECORD OF CHANGE

NUMBER	Topic OF CHANGE	Change DATE	CHANGE MADE BY (SIGNATURE)
01	Activation Triggers /page 7	6/15/16	Dr. Chris Rustin, Director of EH
02	Table of Contents pages	6/20/16	Tim Callahan
03	Reviewed and updated content & format; Pages 1 – 7 with minor edits throughout; refer to the review tab "Show all" next to track changes on the electronic word copy	12/14/16	Byron Lobsinger, EHEP
04	TOC updated Added EH Strike Team Resource Request guidance; index added; PSA-Preventing carbon monoxide poisoning	01/04/17	Byron Lobsinger, EHEP
05	Input updates from DEHD survey: Bulk water testing Shelter definitions EHST Team development by availability	3/22/17	Byron Lobsinger, EHEP
06	Draft watermark changed to Dynamic-refers to the web-version as the most current	10/22/17	Byron Lobsinger, EHEP
07	clarification edits and Food rule updated to current rule numbers on page 39	01/08/17	Dr. Chris Rustin, EH Director Byron Lobsinger, EHEP
08	Added Fire Marshal Max capacity to the Emergency Housing Inspection Report	01/22/18	Byron Lobsinger, EHEP
09	Page 19, Maximum Occupancy not to exceed Fire Marshals capacity	01/22/18	Byron Lobsinger, EHEP
10	Page 3, Added ARC NSS shelter link	03/29/18	Byron Lobsinger, EHEP
11	Page 41, the existing automatic dish machine or-Removed	07/09/18	Byron Lobsinger, EHEP Galen Baxter, FS Director
12	Attachment: Added Food Service Re-Opening Inspection Addendum form	01/13/19	Byron Lobsinger, EHEP Galen Baxter, FS Director

13	Created Annexes A – H Added Attachments	01/30/20	Byron Lobsinger, EHEP Annexes and EH ERP to be reviewed by District EH Directors
14	Updated DPH Logo and Title	03/19/21	Byron Lobsinger, EHEP
15	Updated a couple of links	03/22/21	Byron Lobsinger, EHEP
16	EH ERP updates activate	07/15/21	Byron Lobsinger, EHEP

INTRODUCTION AND PURPOSE

This Environmental Health (EH) Emergency Response Plan (ERP) is an annex to the Department of Public Health Emergency Operations Plan. It is designed for use by the local health departments, the state EH Branch and may be adapted to meet the needs for all-hazard disaster response planning. It provides guidance for identifying potential problems and available resources and will help facilitate an organized response for the efficient use of resources as part of the incident command system (ICS) hierarchical structure. The purpose of this plan is to ensure that environmental hazards to public health and the environment, such as contaminated media, epizootic disease, and environmental health infrastructure failure, are managed through scientific risk-based methodology.

It is recognized that every emergency is different requiring employees to be flexible, open minded, and innovative. Many of the activities described below are applicable regardless of the cause of the emergency and can be site adapted to meet the needs of public health.

This plan will be implemented at the direction of the State Environmental Health Director or his/her designee, District Health Officer or his designee, based on an assumption of authority policy established at the time the plan is adopted. This plan replaces and supersedes any plan published prior to the date on the cover page.

If there is advanced warning of an impending catastrophe the staff should be notified immediately, and every effort should be made to assist them in assuring the safety of their families and the protection of their property. They will, however, be expected to comply with the plan and report to their duty stations at the time scheduled.

In *Webster's Ninth New Collegiate Dictionary,* **emergency** is defined as "an unforeseen combination of circumstances or the resulting state that calls for immediate action" or "an urgent need for assistance or relief".

Emergencies can be categorized according to size, type, or cause. All require an immediate, organized, effective response. Natural disasters are usually large in size and affect many people and large geographical areas. These include hurricanes, floods, tornadoes, ice storms, forest fires, and earthquakes. Manmade disasters are usually localized in nature but can also include large numbers of victims with severe or fatal injuries. They include train wrecks, industrial fires, chemical spills, airplane crashes and intentional disasters such as terrorist events, arson, mob violence, or acts of war.

The following pages provide protocols, policies, and activities along with forms to be used to record actions and manage the EH emergency response. This plan provides a starting block upon which a local EH emergency response plan may be developed for a more effective emergency response. Every disaster and every county and district are different therefore adding information that is specific for your area would greatly enhance the EH ERP.

The process and collaboration that takes place while developing the local EH ERP is just as important, if not more important as having the plan. *The vast majority of emergency managers agree that the most important part of any plan is not the paper it's written on but the partnerships that develop during the planning cycle.*

Emergency Support Functions

During an emergency or disaster, there are fifteen Emergency Support Functions (ESF) within the incident command structure that may assist and have designated response roles as a primary or assisting agency. Public Health is the primary responsible agency for ESF-8, with assisting responsibilities under ESF-6. During an emergency, these support functions may be accessed through the local Emergency Management Agency (EMA) whom is the primary agency to connect with for mutual aid as well as State support through the Georgia Emergency Management Agency (GEMA) at the State Operations Center.
http://www.phe.gov/preparedness/support/esf8/Pages/default.aspx

ESF1 Transportation
ESF2 Communications
ESF3 Public Works and Engineering
ESF4 Firefighting
ESF5 Emergency Management
ESF6 Mass Care, Housing, and Human Services
ESF7 Resources Support
ESF8 Public Health and Medical Services
ESF9 Urban Search and Rescue
ESF10 Oil and Hazardous Materials Response
ESF11 Agriculture and Natural Resources
ESF12 Energy
ESF13 Public Safety and Security
ESF14 Long-term Community Recovery and Mitigation
ESF15 External Affairs

Responsibilities under ESF-8

Public Health is responsible for providing public health services necessary to prevent or control diseases in the community related to the emergency and to assure the best quality of life possible until the emergency is over and normal conditions have returned. Environmental Health responsibilities include sanitation services such as food and water supply safety, insect and rodent control, facility/shelter inspections, and developing and monitoring health information. Nursing services include staffing emergency shelters, first aid, children's medical service, and HIV clinics. Laboratory services include diagnostic tests, and coordination with other labs for specialized testing. Administrative activities will support all functions and provide necessary supplies and equipment to meet the Department's responsibilities.

The Disaster Actions Chart (Attachment A) illustrates the emergencies or disasters that are most likely to occur within the Georgia public health districts and many of the response actions that may be taken by ESF-8, Public Health. Annex E provides brief overviews of disaster scenarios and response actions for reference.

Responsibilities under ESF-6

Public Health is an assisting agency for ESF-6, Mass Care, Housing, and Human Services. The primary responsible agency for ESF-6 is the Department of Family and Children Services (DFCS), whom delegates many of the responsibilities for Mass Care to the American Red Cross (ARC), a voluntary organization authorized by Congress to perform these services. Developing and maintaining a working relationship with these and other partner agencies before an emergency response is critical to a more effective response. EH is responsible for

assisting with Shelter surveys conducted in partnerships with the Red Cross, Local EMA, DFCS and other partner agencies. EH District and County Managers should have access to the ARC National Shelter System (NSS) database. The database contains shelter survey information which may include other usages for the surveyed location, such as a temporary storage location for emergency supplies. The ARC does not approve shelters per se, but rather survey's shelter for capacity and capability and then adds them to the ARC NSS database; communication with the local ARC representative will ensure the most appropriate shelter location is utilized based on the emergency or disaster. EH should plan on inspecting the shelter and mass feeding locations when they have been opened to the public by ARC. EH assists the ARC with ensuring that the shelter and mass feeding location are safe for the public. EH inspection results should be reviewed with the shelter or mass feeding site manager to assist with correcting public health concerns. The ARC, Public Health and partner agencies are providing emergency services with the best intentions to assist those in need. Communication between agencies before, during and after is critical. ARC Shelter link: https://maps.redcross.org/website/maps/ARC_Shelters.html

Disaster Cycle

Disasters and the associated responses have been described as a cyclical process with four phases, Preparedness, Response, Recovery and Mitigation. Each of these phases provide for mechanisms as part of an improvement process to enhance the response to the next disaster.

EH EMERGENCY RESPONSE PLANNING OVERVIEW

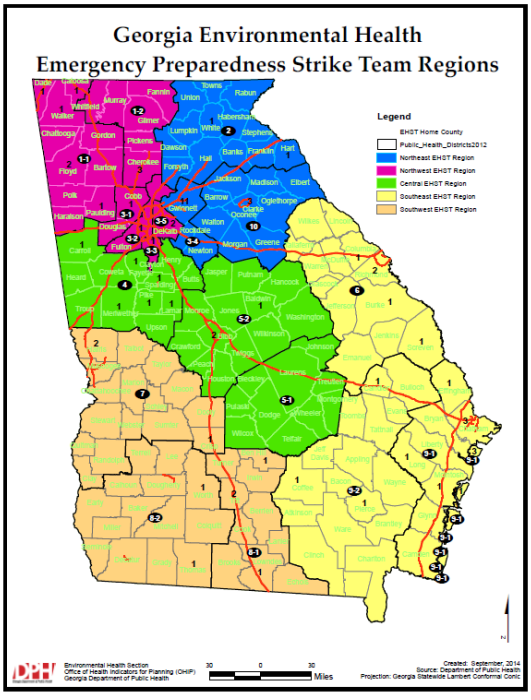
PREPAREDNESS:

Whole community preparedness begins at the local level by building more resilient neighborhoods. State and District Environmental Health support to build local capacity and capabilities is a primary means to enhance whole community resiliency. Public Health and its partner agencies must be in continuous collaboration in order to prepare for, implement and continually update dynamic plans that minimize the environmental hazards to public health before, during and after an emergency or disaster, while still fulfilling the daily mandated program objectives that protect public health. Protecting the public health responders is a primary responsibility to ensure program functionality and effectiveness.

Emergency response plans are typically developed as all hazard plans with appendices that are incident specific based on a risk analysis of the area. Emergency response plans should anticipate the major types of disasters that are most likely to occur in an area; what type of damages they would produce, the impact upon the residents and the resources required to meet the additional needs during such events. Just as important is knowing the resource capacity and capabilities available within the jurisdiction and where or who to contact in order to mobilize resources. Plans should include the primary points of contact with their current contact information and an inventory of resources with locations and maps. Stockpiling needed resources before high risk disaster occur should be done in concert with rotating the stock that may expire.

RESPONSE:

Immediately after a disaster, EH activities become more focused on the primary program activities that meet the immediate needs of Public Health such as safe food, water, shelter, sanitary waste and wastewater disposal, vector control monitoring, exposure to biological, chemical and radiological hazards. EH may also assist with epidemiological investigations and community reception center staffing to monitor an affected population for possible radiation exposure.



Prioritizing EH activities based on the needs created by the disaster is a critical step in determining the initial response. Identifying and locating the resources needed to meet these needs may be concurrent with the initial assessment. Stockpiling needed resources before a high-risk disaster occurs should be done in concert with rotating stock that may expire.

RECOVERY:

After the initial response and basic public health needs are met, recovery operations will begin to take place. EH should determine if the public health EH needs will be met within a satisfactory time frame to ensure public health. If there are unmet needs that may jeopardize public health, additional assistance may be requested to meet the additional resource needs created by the disaster. These additional resources may come from mutual aid requests following the local procedures. If nearby county needs are insufficient, State

resource assistance may be requested through the same resource request process. The State DPH EH Section has coordinated EH Strike Teams comprised of district and county Environmental Health Specialists that prepare to be available to assist disaster affected regions of the State during a response. There are two planned teams within each of the five EH Strike Team regions. During a real-world deployment, Team composition may be incident driven and may be adjusted due to availability and timing. Each planned team has one team leader with five team members. Refer to the Annex A, EH Strike Team SOG and Annex B, EH Strike Team Standard and Advanced credentialing, for more information about guidance and training. An overview of the EH Strike Team program may be found at this link:
https://dph.georgia.gov/sites/dph.georgia.gov/files/EnvHealth/EmerPrep/EH%20Strike%20Team%20Program%20Overview.pdf

All EH specialists within the state are welcome to become Team members by adding their name to the roster to help other Environmental Health offices after a disaster strikes. Local supervisor approval should always be received by members prior to attending EH Strike Team trainings, exercises or when requested for a real-world deployment.
To become an EH Strike Team member, notify the Environmental Health Emergency Planner at DPH (404-657-6534) and complete the registration at this link:
https://www.surveymonkey.com/r/EHSTMemberCredentialing

MITIGATION:
After each disaster response, an After Action Review and Report should be completed. The lessons learned from the response, will determine what went right and what needed to be improved. An improvement plan is developed to enhance future response capacities and capabilities. Mitigation would be part of this improvement plan. It may include changing the rules, regulations, processes, procedures, capacity and/or capabilities that may prevent or reduce the deleterious effects of future disasters of the same kind.

ENVIRONMENTAL HEALTH ORGANIZATION STRUCTURE

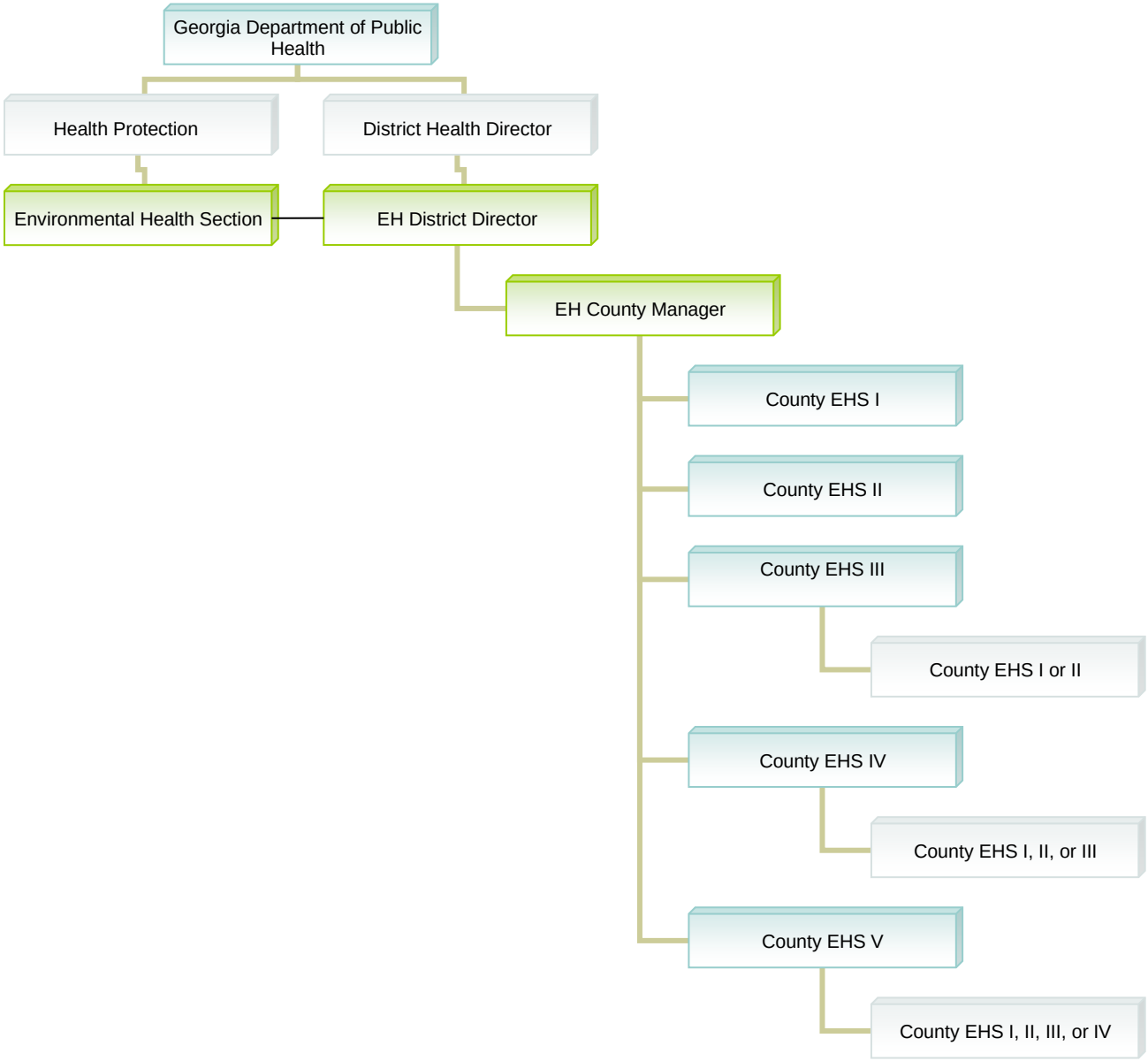
Environmental Health Specialists (EHS) provide Environmental Health services in Georgia. There are six (6) position classifications that vary according to levels of supervisory responsibility and programmatic activities.

EHS are employees of the 159 county Boards of Health (referred to as Public Health in this document). EHS's are supervised by the District Environmental Health Directors who are GDPH employees that report to the District Health Directors and indirectly to the State EH Director.

There are eighteen (18) Public Health Districts in the state, with each having an Environmental Health District Director. The State Environmental Health Section provides oversight, programmatic support and consultative services to the district and local staff. Refer to the organization chart.

Within the ICS structure during a disaster response, the Environmental Health Branch is positioned within the Operations Section. ICS forms are preferred to provide document consistency during response operations. Annex D is an ICS forms workbook.

EHS = Environmental Health Specialist



ACTIVATION TRIGGER LEVELS

The EH Emergency Response Plan is triggered when a situation in a community moves from normal to emergency action and the event overwhelms day to day operations. For example, a flood event can displace communities into temporary housing which would trigger EHS to inspect shelters, temporary food operations, water source, solid waste, and wastewater disposal. The following activation levels signifies when the Emergency Operations Center is activated at DPH and outlines requests for assistance.

1) Level 1 Red (Full Scale Activation)

a) **EOC Activation:** All primary departments and command/general staff under the DPH EOP are notified and staffed in the EOC. Operational periods are defined and situation reports (SitRep) and incident action plans (IAP) are required. State Operations Center is most likely activated.

b) Potential Emergency or Disasters

(1) Major disaster/event – possibly a Federally declared disaster
(2) Multiple agencies involved
(3) Possible National Disaster Medical System (NDMS) activated
(4) Extensive damage
(5) Managed shelter capacity is overwhelmed (at or exceeding capacity)
(6) Extensive area/instate evacuations or large evacuations from border states into GA
(7) Intrastate and interstate resource support required
(8) Novel disease outbreak
(9) Pandemic Influenza
    (i) Biowatch Actionable Result (BAR)
    (ii) SNS/CRI activation
    (iii)GEMA SOC fully activated

2) Level 2 Yellow (Elevated Activation)

a) **Limited Activation:** This is limited agency activation. All primary departments and command staff under the DPH EOP are notified and staffed as necessary in the EOC. Activation may be virtual through WebEOC. Operational periods are defined and situation reports (SitRep) are required. IAPs are optional and may be verbal.

b) Potential Emergency or Disasters

(1) Moderate event – possibly a declared state of emergency
(2) Selected agencies involved
(3) Possible escalating event
(4) Large area/instate evacuations or large evacuations from border states into GA
(5) Intrastate and interstate resource support required
(6) Some shelter support required
(7) Hospitals experiencing extensive outpatient/inpatient surge

3) Level 3 Green (Active Monitoring)

a) This is monitoring of small/localized incidents and daily activities. Notification will be made to those departments who would need to take action as part of their day-to-day responsibilities

by an EP&R Duty Officer. There are no defined operational periods and Duty Officers will give a situational briefing to the on-coming Duty Officer via email, call, or briefing sheet, during their out brief.

b) Potential Emergency or Disaster

c) Small/localized incident or event: suspicious substance events, outbreak events, contained fires, bomb threats
d) Daily operations
e) Two or more agencies involved
f) District EOCs are in monitoring status
g) Shelter support requests are minimal to none
h) Small scale evacuations

INCIDENT MANAGEMENT ACTIONS

1) Notification and Assessment

a) DPH public health districts and some nongovernmental organizations report incidents and potential incidents using established communications and reporting channels. The DPH gathers and disseminates information about incidents or potential incidents to evaluate threats and determine the need for coordination of incident management actions.

2) **Reporting Requirements** DPH public health districts are required or encouraged to report incident information through their local EMA office and thru 2PT EOC (state public health duty officer when the 2PT EOC is not fully operational), to the State Operations Center (SOC).

a) DPH reports information relating to actual or potential emergency situations to CDC and/or the SOC.

3) **Threat Monitoring and Initial Incident Assessment.** The DPH uses a 24/7 Duty Officer call-in number to maintain and monitor daily situation awareness to identify threats and hazards inside of or approaching the borders of the State of Georgia and passes that information to State staff and District personnel as appropriate. This includes monitoring the following networks/agencies for continuous updates:

(1) National Weather Service
(2) CDC Health Alert Network (HAN)
(3) WebEOC (DPH)
(4) GEMA Alerts
(5) Emergency Email and Wireless Network (www.emergencyemail.org)
(6) Local/National news outlets
(7) Atlanta-Fulton County EMA Alerts
(8) Rx Response
(9) 866-PUB-HLTH
(10) Georgia Poison Center

4) **Dissemination of Warnings and Bulletins.** Watches, warnings and bulletins are issued by various agencies based on their missions and authorities. For example, the National Weather Service issues weather-related notices to warn the public of storms and severe weather. The DPH monitors these warnings and bulletins and disseminates them to the appropriate personnel and/or districts to inform them of possible or probable incidents that will require action.

(1) Activation

(a) The DPH 2 Peachtree Emergency Operations Center (2PT EOC) will activate personnel based on the level of emergency as outlined in the Concept of Operations (CONOP) sections.

5) Resource Requests for Assistance

a) PH District Support to Other Districts. Public health districts and regions are encouraged to coordinate response and preparedness efforts across boundary lines when responding to a local incident/emergency. Regions/districts can coordinate cross-regional/district requests for assistance without needing state support to respond to a local incident/emergency.

6) **State Support to PH Districts**. DPH processes requests for assistance from district health offices once local resources are clearly insufficient to respond to the local incident/emergency. Refer to the Attachment B: "DPH EH Strike Team Resource Request Process"

7) **State Support to States.** Once it is apparent that local and State resources are not adequate to respond to the incident/emergency, the Governor can request assistance from States that are members of the Emergency Management Assistance Compact (EMAC). Under the HHS Region IV Unified Planning Coalition (UPC) SOP, DPH will assist, if possible and as authorized by the Commissioner, in response to pre-EMAC request.

8) **Federal Support to States.** If the emergency/disaster is large enough to warrant a request for EMAC support, it usually is large enough to justify a request for Federal assistance. The Governor can request, through FEMA, a Presidential disaster or emergency declarations under the Stafford Act. These requests indicate the extent of the damage and the types of Federal assistance required. FEMA forwards the request to the White House, simultaneously notifying the Secretary of Homeland Security. If a declaration is issued, FEMA designates the types of assistance to be made, and the counties eligible to receive assistance. In some cases of large-scale catastrophic events, the Stafford Act authorizes declarations without a Governor's request.

(1) The Governor, or his designee, will request medical counter measures from the Centers for Disease Control and Prevention under the advisement of the DPH Commissioner and/or the Director of Health Protection.

EH EMERGENCY AND DISASTER PLANNING
PREPAREDNESS

Preparedness involves the development of an EH Emergency Response Plan that enables the programs, activities, and systems existing prior to the threat or occurrence of a disaster to be used to support or enhance the response to the emergency. It also includes the implementation of the sections of the plan calling for memorandums of understanding (MOU), contracts, and mutual aid agreements with other agencies and organizations both public and private.

The items listed below are critical components of an effective plan.

- Identification of the risk for potential emergencies and disasters.
- Determination of Departmental responsibilities.
- Actions necessary to meet Departmental responsibilities.
- Identification of potential needs.
- Identification of resources to meet needs.
- Procurement of M O U's to insure availability of resources
- Ensure EH Responder Safety and Tracking
- Directory of local resources by item, agencies, individual, and expertise.
- Accurate record keeping system to
    - Manage response efficacy
    - Allocate available resources
    - Determine response costs for possible reimbursement.
- Emergency Response Improvement Process
    - De-briefing (hot wash)
    - After Action Reporting
    - Improvement Actions
    - Follow-up
- Policy to assure regular review and revision of the plan.

A copy of all County EH ERP's should be noted as annexes to the District EH ERP and both paper copies and digital copies should exist and be maintained in separate locations to ensure continuity of operations.

The District EH ERP should address communication, situation awareness, ensuring a common operating picture, available resources, the coordination of personnel and resources for mutual aid between county EH offices. It should also include request procedures for accessing mutual aid from counties within the district as well as accessing State EH resources through the local request process. It should contain information on how to contact all supervisory staff within the district at any time. A current database should be maintained and always available by both electronic and a paper copy. It should include all primary point of contacts (POC) with preferably a cell phone number as well as an alternate phone number and a backup person with phone numbers. These POC's should be able to contact their assigned EH employees at any time. Storing this information within a digital calling database may expedite the process.

The "Contacts File, Resources File, and Directory" should include:
District EH staff
District PH staff
EH County Supervisors
DPH EH staff
County EMA offices
DFCS county directors & district supervisors
DNR regional managers
Red Cross County, Regional and State
Salvation Army
Department of Agriculture regional supervisors & state staff
DOT district engineers
EMS Regional coordinators
County Sheriffs
State Patrol Post Commanders within the district
County commissions Chairman's within the district
Mayors of all towns & cities in the district
Fire chiefs and Police chiefs for all departments in the districts

Other primary and secondary key points of contact that might be able to assist during response activities.

The District EH ERP should provide for the availability of necessary surge supplies and equipment to adequately respond to a disaster in one county or multiple counties within the district. A list of these surge supplies should be maintained along with locations with a map. Surge supplies should be rotated whenever possible to ensure functionality and reduce costs. This would include copies of all forms, protocols, policies, procedures and equipment to carry on surge and daily EH operations.

A procedure of reporting needs, resources, actions and accomplishments is vital if the emergency involves more than one county. A form for consolidating this information and reporting to the state offices is necessary.

An annual review and update of the plan is an absolute must for it to be kept current and effective.

Copies of the EH ERP should be kept in the District Office and in the District Environmental Health Director's (DEHD) vehicle. The District Environmental Health Director should require that each county's plan be available in each county office and in the County EH Staffs vehicles. EHS safety is number one, utilizing adequate PPE when needed is critical to enable EH to respond to community needs. Annex H - EH Disaster Field Safety Guide provides overviews of disaster scenarios and response actions to consider while deployed within a disaster area.

RESPONSE

Incident Assessment:

In response to an emergency or disaster, an assessment of the current needs and a plan to fulfill the unmet needs should be created as soon as possible. A designated operational period should be noted before the next assessment is completed. Emergencies and disasters are dynamic and therefore ever-changing.

Incident Action Plan:

An Incident Action Plan should be completed to prioritize and utilize resources efficiently.

This order of action is dictated by the situation at the time your agency becomes active in its response role. For example, your actions would be quite different in responding after an earthquake than in preparing for an impending hurricane or flood. A planned, proactive public information program using all forms of the media is necessary for and effective response in all phases. Annex G EH Disaster Communications Guide provides an overview of disaster scenarios and public information – risk communication strategies and examples for response actions.

Regardless of the type of disaster or time of action, most agencies organize their efforts along the following lines.

- The primary disaster response priorities are
  - Life safety
  - Incident stabilization
  - Preventing environmental damage.

- Initial response actions are directed at securing the scene, removing people from further danger, initial treatment of injuries, and meeting the critical needs of food, water, and safe shelter

- After basic human needs are met, the response activities begin to change into the recovery phase of the disaster cycle in order to get the whole community back to a new normal. The response begins to address the problem of reducing health hazards. EH may be tasked with assisting with Epidemiological surveillance, monitoring water and food supplies for safety, ensuring sanitary waste and wastewater disposal and conducting disease vector investigations and recommending remedial actions.

RECOVERY

- Recovery activities move toward re-establishing more normal living conditions by addressing long-term housing, health education, assessing community health, and tracking victims to determine long-term effects from possible exposures during the event. This would also include EH responders. If no exposures were reported, then the follow-up is minimal. The county or district epidemiologist may be able to assist with responder follow-up activities. Cost accounting is especially important during the response and recovery phases after an event. Some key EH recovery priorities include:
    - Post event evaluation to determine recovery priorities.
    - Communication and coordination with other agencies to assure safe food supply and safe food service.
    - Requesting additional EH support for the surge in EH services such as re-opening food service inspections due to power or water outages.
    - Coordination with other agencies to assure safe, appropriate housing for victims of the disaster.
    - Inter-agency cooperation to assure a safe water supply and adequate sewage disposal.

MITIGATION

- As the impact of the event decreases the efforts move into the mitigation phase of emergency response by seeking ways to reduce suffering and losses in future events. This is done by evaluating actions taken, modifying the plan to address unmet needs, providing information and training to residents and responders of the area, and working with other agencies to improve awareness and strengthen regulatory programs.
    - Proper location, construction, and protection of wells to prevent flooding and contamination
    - Enhance regulations to protect property and lives during future events
        - Prohibition of new construction in identified flood plains
        - Relocate existing businesses or homes out of a potentially hazardous area
        - Include lessons learned into the evaluation of proposed home sites to identify potential hazards (old landfills, buried fuel tanks, etc.)
        - Active participation in community planning, zoning,

OPERATIONAL PLANNING AND PROCEDURES

Important Note: Check the Public Health Information Library (PHIL) EH EP page for additional guidance documents, tools, electronic fillable inspection forms or reports to help expedite reports during a disaster.

MASS FEEDING FACILITIES
STANDARD OPERATING PROCEDURES

1. Contact local Emergency Management Agency, Red Cross, city governments, churches, and the Salvation Army to identify locations of potential mass feeding sites.

2. Conduct an inspection of the facility, preferably accompanied by a representative of the agency/organization, if possible.

3. Identify the source of water for the mass feeding site and collect a sample if it is not an approved public water system or water system approved by DPH under DNR MOU. A secondary source should be identified for use in case the primary source is no longer useable due to contamination or loss of power. If an on- site well is used, an alternate source of electricity needs to be found and assigned for use by the site. Identify the type of sewage disposal serving the facility and record on the inspection form. An alternate method of wastewater disposal should be considered for use in case the primary one no longer functions due to power loss or treatment plant failure. If the use of non-sewered toilets is an option, estimate the number required and enter it on the form.

4. Make recommendations to agency representative; record them on the form, along with site information such as address, telephone number, agency name and contact person.

5. Create a log of feeding sites using the information collected above.

6. Develop operational information that addresses food safety hazards during emergency situations to be given to operators detailing safe food service methods, menu restrictions, cleaning and sanitizing requirements and methods, temperature control, personal hygiene, solid waste management, and insect and rodent control. These materials should cover food operations from source of food through preparation, cooking, transportation, service, disposing of waste, and cleaning and sanitizing of equipment.

7. Mass feeding sites shall be inspected at least once each day with follow up inspections made as needed to obtain corrections of violations. Operational deficiencies will be discussed with the person in charge of the site at the time of the inspection detailing the problem and giving corrective actions to be taken. Enter information on inspection form.

8. In the event of a food borne out break a joint investigation will be performed by the County EH and the District Epidemiologist. Please see the Environmental Assessment Guide in the Education Section (pg. 107) as well as the Food and Water Related Illness Complaint Form (pg. 114) in the back of this manual.

ENVIRONMENTAL HEALTH INSPECTION REPORT
EMERGENCY FOOD SERVICE

Health District: ***County:*** ***Date:***

Facility Name: ***Agency:***

Street Address: ***City:*** ***Zip Code:***

Contact Person ***Telephone:***

Type of Facility: Shelter ☐ Feeding Site ☐ Kitchen ☐

Number of meals daily: Prepared _____ Served _____

Source of meals if not prepared on site: _____

Water Supply: Type: Public Water ☐ Transported ☐ Private Well ☐
Quality: Acceptable ☐ Unacceptable ☐ Unknown ☐
Sampled: Yes ☐ No ☐ Unknown ☐ Date sampled_____

Sewage Disposal Type: Public ☐ Septic Tank ☐ Non-Sewered Toilet ☐ Other ☐
Functioning: Yes ☐ No ☐
Serviced/Clean: Yes ☐ No ☐ Service Company Contact: _____

Food Storage: Acceptable ☐ Unacceptable ☐
Corrections/Comments _____

Food Preparation: Acceptable ☐ Unacceptable ☐
Corrections/Comments _____

Food Temperatures (list additional locations on back): **Cold**-<= 41º, **Hot**: >= 135º

Location	Food	Hot	Cold

Equipment-Utensils: Clean/Sanitized ☐ Dirty ☐ Bad Repair ☐
Corrections/Comments_____

Hand Washing Facilities: Acceptable ☐ Unacceptable ☐
Corrections/Comments_____

Trash/Garbage Handling: Acceptable ☐ Unacceptable ☐
Corrections/Comments _____

Insect & Rodent Control: Acceptable ☐ Unacceptable ☐
Corrections/Comments _____

Orders/Instructions Given_____

Discussed With: _____ Inspected by: _____

Emergency Food Service Notes

Health District: ***County:*** ***Date:***

ENVIRONMENTAL HEALTH
MASS FEEDING SITES LOG

District: ***County:***

Date Opened	***Location Name and Address***	***Operator Name of Agency Local Address***	***Telephone # Operator Headquarters***	***Water Supply***	***Sewage Disposal***
Date Closed		***Contact Person***	***Local Manager***		

EMERGENCY HOUSING FACILITIES
STANDARD OPERATING PROCEDURES

Emergency Housing Facility (Shelter) Type definitions:

All shelters are considered "General Shelters". The following provides further information on the specific characteristics related to event duration as well as specific subjects associated with shelters (e.g.- pets). All shelters, by ADA law, are required to provide functional and access needs resources for shelter residents. EH is responsible for the inspection of ARC shelters.

Primary Shelter Types:

Evacuation (Short Term Shelter) – Used during an emergency evacuation for the general population for usually less than 72 hours. Cots and supplies are generally not distributed for evacuees. These shelters are inspected by local Environmental Health daily.

Long Term Shelter- Used after a disaster for the general population usually for more than 72 hours. Cots and some supplies are provided for evacuees. These shelters are inspected by the local Environmental Health office daily.

Pet Friendly Shelter- Pet Friendly Shelters are General Shelters which provide pet housing adjacent to the General Shelter. A designation approved by the Department of Agriculture and are usually separate but adjacent to either a short or long term shelter. These shelters are inspected by the Georgia Department of Agriculture after opening.

Other Shelter Types:

Special Needs Shelter- There are no "special needs" shelters in Georgia. The term "special needs" has been replaced by addressing the functional and access needs of individuals in a general shelter.

Special Medical Needs Shelter- At this time, due to limited capacity, there are no plans for opening special medical needs shelters. During an emergency response, individuals with special medical needs may be referred to healthcare facilities.

Independent Shelters- (formerly Good Samaritan Shelters) are opened by private organizations or people in order to assist displaced individuals during an emergency or disaster. NOTE: A courtesy inspection of these shelter types may be performed if requested by the shelter authority and authorized by the local EH Manager, but EH is not mandated to inspect these types of shelters. An independent shelter guidance document is posted on PHIL to provide shelter managers with shelter safety educational material.
PHIL Environmental Additional Documents Emergency Preparedness

Warming or Cooling Stations- are opened by the local government and usually open less than 24 hours and are the responsibility of the local authority and are not the responsibility of ESF-6. (Refer to the GEOP Annex covering these facilities for more information)

1. Locations are to be pre-identified in collaboration with the following local agencies: Environmental Health, American Red Cross chapter, the Department of Human Services, Division of Family and Children Services and the local Emergency Management Agency. Shelters should be inspected by environmental health personnel in conjunction with representatives of those agencies to evaluate its fitness for use as a shelter. During the evaluation, items such as space, water supply, sanitary facilities, sewage disposal, lighting, ventilation, heat and or air conditioning, solid waste, vector control and safety should be considered. Part of the facility may not be suitable as a shelter and should not be considered when establishing the maximum occupancy number.

2. The maximum occupancy and any restrictions or special requirements for each shelter should be stated in writing to the owner of the facility, the agency to operate the facility, the Emergency Management Agency, and the Division of Family and Children Services. Use **20** square feet for short term shelters < 72 hours (Evacuation), and **40** square feet for long term shelters, > 72 hours duration (Post Impact). The maximum occupancy identified shall not exceed the fire marshal's capacity unless emergency authorization has been received. Pandemic related occupancy capacity is incident dependent, refer to current guidelines. The Red Cross is responsible for assuring cots, blankets, and personal hygiene kits, some durable medical equipment, consumable medical/supplies and basic human needs items are available at general shelters.
   Refer to GEMA Annex ESF-6: https://gema.georgia.gov/plans-library-documents

3. Information should be distributed within the community of any emergency shelter opening, whether it has been previously approved or not and must be reported to Emergency Management Agency and Public Health. Upon receiving notice of unlisted shelters opening, Public Health may send an EHS to inspect the facility at the discretion of the District Health Director. The shelter criteria shall be used to evaluate the site and establish its maximum allowable occupancy.

4. Other agencies that have sheltering responsibilities shall be informed of the existence of the shelter, its maximum occupancy, and any restrictions that might apply.

5. All occupied emergency-housing (shelters) facilities shall be inspected daily. The inspection shall be recorded on the Emergency Housing Facility Report.

6. Any issues found will be discussed with the responsible person at the facility and corrective measures identified. Should the violations present a hazard to the occupants, the shelter manager will be instructed to move the occupants from danger and if necessary, relocate them to another shelter. The environmental shift supervisor should be notified and consulted if relocation or reduction in occupancy is considered necessary.

7. The inspection report will be discussed with the shelter manager and signed by both parties. The original will be turned in to the environmental supervisor by the end of the workday.

8. Follow up actions will be taken as necessary to assure the safety of shelter occupants, and to provide them with the best accommodations possible as well as treat them with dignity and respect.

Note: County Environmental Health offices should identify and communicate with local ESF # 6 and the Red Cross representatives on a regular basis. Shelter surveys conducted by the Red Cross should be coordinated with EH Emergency Housing inspections (shelter Inspections) of locally identified shelters **at a minimum of once (1) every four (4) years** to assess fitness.

ENVIRONMENTAL HEALTH INSPECTION REPORT
(PRE-INSPECTION/POST-INSPECTION)
EMERGENCY HOUSING FACILITIES

Health District: ***County:*** ***Date:***

Facility Name: ***Agency:***

Street Address: ***City:*** ***Zip Code:***

Contact Person ***Telephone:***

1. **Shelter Type:** ☐ Evacuation ☐ Long Term >72 hrs. (post Impact)
(Check all that apply) ☐ Pet Friendly Other_____

2. **Capacity:** Total Capacity: 20 sqft / Evacuation _____
Fire Marshal max. Capacity (if posted) _____ 40 sqft / Long Term _____

3. **Food Service:** School cafeteria kitchen or kitchen adequate for food preparation ☐
Food Prep Off-Site and catered from approved location ☐

4. **Water Supply:** Type: Public Water ☐ Transported ☐ Private Well ☐
Quality: Acceptable ☐ Unacceptable ☐ Unknown ☐
Sampled: Yes ☐ No ☐ Unknown ☐ Date sampled_____
Hot Water: Yes ☐ No ☐

5. **Sewage Disposal** Type: Public ☐ Septic System ☐ Non-Sewered Toilet ☐ Other ☐
Functioning: Yes ☐ No ☐
Serviced/Clean: Yes ☐ No ☐ Service Company Phone: _____

6. **Showers:** Shower Capacity Criteria: 1 per 25 persons ***may be augmented***
Total Shower Capacity: _____
Acceptable ☐ Unacceptable ☐

7. **Toilets:** Toilet Capacity Criteria: 1 per 20 persons ***may be augmented**
Total Toilet Capacity: _____
Acceptable ☐ Unacceptable ☐

8. **Handicapped Accessible:** Yes ☐ No ☐

9. **Trash/Garbage Handling:** Acceptable ☐ Unacceptable ☐
Corrections/Comments_____

10. **Insect & Rodent Control:** Acceptable ☐ Unacceptable ☐
Corrections/Comments _____

11. **General Comments:**

_____

Discussed With: _____ Inspected by: _____

Emergency Housing Facilities Notes

Health District: ***County:*** ***Date:***

ENVIRONMENTAL HEALTH
EMERGENCY HOUSING SITES LOG

District: ***County:***

Date Opened	***Location Name of Facility Address***	***Operating Agency Name of Agency Local Address***	***Telephone # Local Agency***	***Capacity***	***Water Supply***	***Sewage Disposal***
Date Closed		***Contact Person***	***Site Number***			

POTABLE WATER

The availability of an adequate and safe amount of potable water is a major concern in most natural disasters.

The Environmental Protection Division (EPD), Georgia Department of Natural Resources (DNR) is responsible for public works and the coordination of safe water and sewer systems during disaster related incidents that involve **public** water supplies. Public Health-Environmental Health is responsible for overseeing **individual** water supplies/ **private** wells. Environmental Health would also notify regulated facilities of any public drinking water advisories issued by EPD or local water authorities.

Both public and individual water supplies are subject to contamination and/or failure due to power loss or mechanical breakdown.

The following pages discuss these problems and offer suggested actions to address this challenge.

Again, research and planning prior to the event will enable you to respond quicker and better. Primary and secondary water-testing labs should be identified. Requisition forms and sample submittal instructions for each lab should be kept on file. Advanced preparation of press releases and EXAMPLE PUBLIC SERVICE ANNOUNCEMENTS warning of contamination, giving sources of safe water and providing instruction on procedures to chlorinate or boil water of questionable quality is a necessity.

The treatment and use of water of unknown quality is an action of last resort and should not be taken if bottled water or transported water of a safe quality is available.

Should a water borne outbreak be suspected pertaining to individual water supplies, a water well evaluation should be performed along with samples. Again, any water borne outbreak should be investigated in a collaborative effort with your District Epidemiologist. The water well complaint form can be found in the Education Section at the back of this manual.

INDIVIDUAL WATER SUPPLIES
EMERGENCY TREATMENT

1. **Boiling Water:** Boiling of water has been used for many years as a method of killing vegetative forms of bacterial contamination and is a practical treatment for small volumes of water on a temporary basis.

   a. Water should be free of debris and filtered through cloth or paper towels to remove sediment.

   b. It is then placed in a clean container that does not contain leachable metals such as lead, antimony or arsenic.

   c. Bring water to a **rolling** boil for one (1) minute.

   d. The flat taste can be removed by aerating the water by pouring from one container to another several times.

2. **Chemically Sanitize Water:** Household bleaches such as Clorox, Purex and others that normally contain approximately 5.25 % available chlorine may be used to disinfect water in dilutions indicated in the following table.

Dosage of Chlorine Bleach		
Volume of Water	Clear Water	Cloudy Water
1 quart	2 drops	4 drops
2 quarts	4 drops	8 drops
1 gallon	8 drops	16 drops
2 gallons	16 drops	32 drops
3 gallons	1/4 teaspoon	1/2 teaspoon
5 gallons	1/2 teaspoon	1 teaspoon
Mix well and allow to stand for thirty (30) minutes before using		

EMERGENCY WATER SUPPLIES
STANDARD OPERATING PROCEDURES

1. Work with EMA to identify source of water supplies to be used in the event that the primary water supply is unavailable due to contamination or mechanical failure. Sources to be considered should include nearby approved systems that might be temporarily connected to primary distribution system, bottled water, and water from an approved system that is transported to disaster area in bulk tanks such as military "water buffalos", and food grade trucks or rail cars. Coastal areas may also have access to desalinization plants aboard ships or tankers used for food products.

2. Identify types of transportation available in the area and obtain letters of agreement with the company or agency to provide this vital service to the community. (Work with local EMA)

3. Determine distribution sites throughout the area considering population density, accessibility, parking, safety, and security. (Work with local EMA)

4. If requested or if water is from a questionable source and an alternative water source is not available, sample every bulk shipment by checking the residual chlorine level before distribution. Chlorine test strips that are capable of detecting chlorine between 0.0 and 10 parts per million (ppm), may be used to test water samples poured aseptically into a sterile sampling bottle following the manufacturer's directions. The Chlorine level for potable water should be between 0.2 and 1.0parts per million at the time of consumption. Public drinking water chlorine levels are usually between 0.2 and 1.0 ppm. The current maximum contaminant level (MCL) for chlorine in drinking water is 4.0 ppm. If the chlorine level is below 0.2 parts per million and other sources of potable water are not available from an approved source, chlorine sodium hypochlorite (dry powder or non-scented bleach 5.25 %) may be added to sanitize the water. (Refer to the chart below) Mix thoroughly and let stand for a minimum of 30 minutes. Check chlorine level again, if it meets potable water disinfection levels then it may be used, if not chlorinate again and let stand an additional 30 minutes before testing the second time. Chlorine level will dissipate over time. Always recheck before using.

5. If possible, water should be dispensed into containers that are used for no other purpose and have been thoroughly cleaned and sanitized. Care must be taken to not contaminate the dispensing outlet by immersing it into the water in the receiving container or allowing contaminated water to be splashed onto it.

6. Each bulk water hauler shall maintain a manifest that identifies the date and location of the approved water source and the date and location of the water customer.

7. If bottled water is to be used, the brand name, amount, and if possible, the lot number(s) dispensed at each site should be recorded.

Formulas:

BULK CONTAINER SANITIZING

Add 3.75 gallons non-scented bleach (5.25%)/1000 gallons water (200 ppm). Agitate the chlorine solution thoroughly and allow contact with tank and tank hoses for at least 30 minutes. Run chlorine solution to waste through delivery hoses. The tank must then be thoroughly rinsed with potable water before filling.

Establishing chlorine residual using non-scented household bleach (1.0 ppm)

Add 6 tablespoons (3 ounces) non-scented bleach (5.25%) per 1,000 gallons water.

Liquid Sodium Hypochlorite - 5.25 Percent Available Chlorine

(Household Bleach such as Clorox, Purex, Speedup, etc.)
(Manufacturer's name is for information and not to show preference)

Dosage parts per million (ppm)	50 gallons water	100 gallons water	500 gallons water	1000 gallons water	5000 gallons water
1	¾ teaspoon	1 ½ teaspoon	7 ½ teaspoon	3 ounces	13 ounces
10	7 ½ teaspoons	3 ounces	12 ounces	1 ½ pints	1 gallon
50	6 ounces	13 ounces	2 quarts	1 gallon	4 ¾ gallons
200	1 ½ pints	1 ½ quarts	2 gallons	3 ¾ gallons	19 gallons

Calcium Hypochlorite Granules or Tablets-70 percent available chlorine

(HTH, Perchloron, Sentry, etc.)
(Manufacturers name is for information and not to show preferences)

1	-	-	-	-	1 ounce
10	-	-	1 ounce	2 ounces	10 gallons
50	-	1 ounce	5 ounces	10 ounces	3 pounds
200	2 ounces	4 ounces	1 pound & 3 ounces	2 pounds & 6 ounces	12 pounds

ENVIRONMENTAL HEALTH INSPECTION REPORT
BULK TRANSPORTED WATER

Health District: ***County:*** ***Date:***

Receiving (Distribution) Site Name:

Street Address: ***City:*** ***Zip Code:***

Operating Agency Name:

Contact Person: ***Telephone:***

Source of Water: Public system ☐ Military Base ☐ Bottled Water ☐ Lot#_____
Private Well ☐ Institutional Well ☐
Other ☐ (Specify)_____
Name of Supplier_____
Address_____
Contact Person_____
Telephone # _____

Water Information: Date loaded_____
Chlorinated at source Yes ☐ No ☐ (1.0ppm -4.0 ppm)
Chlorine at delivery satisfactory Yes ☐ No ☐ (0.2 - 1.0 ppm)
Chlorine added at site %Cl____ Yes ☐ No ☐ _____Amount (gal)
Chlorine re-tested ____ppm _____Time _____Date
Chlorine re-tested ____ppm _____Time _____Date
Chlorine re-tested ____ppm _____Time _____Date

Water released for distribution Yes ☐
Water Unsafe for Human Consumption ☐

Transporting Agency:
Name_____
Address_____
_____
Contact Person_____
Telephone #_____

Comments:_____
_____
_____

Inspected by:

Discussed With:

INDIVIDUAL WATER SUPPLY SYSTEMS (WELLS)
STANDARD OPERATING PROCEDURES

In the event of a natural disaster individual water supplies are at great risk of becoming contaminated especially if they are covered by floodwaters. The following procedures will be used in determining the safety of individual water supplies. **It is recommended to conduct a well evaluation on each inspected well using the Water Well Evaluation Report Form located within this plan.**

1. FLOODED WELLS:

a. Clean well head thoroughly
b. Flush system until water is clear
c. Chlorinate well (see procedures on next page)
d. Allow chlorine to remain in system 8 hours minimum
e. Flush system to remove chlorine
f. Collect water sample using aseptic methods
g. Fill out lab forms completely
h. Enter sample data in the sample log
i. Mark sample location on map by collecting GPS coordinates
j. Send or carry sample to lab (EH may utilize own incubator)
k. Record and report lab results on well evaluation
l. Notify owner of results
m. Give owner instructions on corrective measures if sample is positive
n. Take follow up action as needed
o. Collect second sample
p. Repeat procedure if second sample is positive

2. NON-FLOODED WELLS:

a. Turn on water for several minutes to make pump turn on
b. Collect sample using aseptic technique
c. Fill out lab forms completely
d. Mark sample location on map by collecting GPS coordinates
e. Fill out sample log
f. Send or carry sample to lab (EH may utilize own incubator)
g. Record and report lab results on well evaluation
h. Notify owner of results
i. Give owner instructions for corrections if sample is positive
j. Collect second sample after corrections have been made
k. Repeat process if needed, make recommendations as appropriate

BEWARE OF POSSIBLE ELECTRICAL SHOCK IN ALL ACTIONS AROUND WELLS

WELL CHLORINATION INSTRUCTIONS

1. Thoroughly **clean** all accessible surfaces removing loose debris. Then, wash the area with a strong chlorine solution (1 quart of household bleach per 5 gallons of water).

2. **Calculate** the amount of chlorine (unscented household bleach ~5.25%) needed. Determine the amount of water in the well. Use the table below and add the appropriate amount of bleach. A minimum of 50 ppm chlorine solution is required. (Note: Chart calculates approximately 200 ppm concentrations.

3. Run water from an outside faucet through a hose until a strong chlorine smell can be detected. Place the end of the hose in the well allowing the water to run down the sides of the casing and **circulate** for at least 15 minutes.

WATER DEPTH (FEET)	WELL DIAMETER (4 qts= 1 gallon)					
	2"	4"	6"	8"	24"	36"
20	1 ½ qts	1 ½ qts	2 qts	2 ¼ qts	2 gal	4 gal
40	1 ½ qts	1 ½ qts	2 ½ qts	3 qts	NA	NA
60	1 ½ qts	2 qts	2 ¾ qts	3 ¾ qts	NA	NA
80	1 ½ qts	2 ¼ qts	3 ¼ qts	4 ¼ qts	NA	NA
100	1 ½ qts	2 ½ qts	3 ¾ qts	5 1/2 qts	NA	NA

If depth and diameter are unknown, 1 gallon of bleach can be used.
Extra bleach does not necessarily mean extra disinfection.
Source: University of Georgia Cooperative Extension Service

4. Turn off the hose and open all the taps beginning farthest from the well and enter the home opening each tap, one at a time, until chlorine can be detected. *Please include hot water faucets, toilets, bathtubs, washing machine, etc.*

5. Once the chlorine odor reaches all outlets, let the water system stand ~8 hours. *Preferably overnight. Refrain from any water use during this time.*

6. **Flush** the system of chlorine by turning on an outside faucet letting it run until the chlorine smell dissipates. Finally, run the indoor faucets until the water is clear and the chlorine smells are gone. Do not run unnecessary water into the septic system or allow the chlorinated water to drain into a stream or pond. *The well cannot be flushed too much!*

7. The water should be retested to determine if it's safe to drink. It is recommended that over the next several weeks two additional samples are taken and the results are satisfactory. **Repeated chlorination and/or a well professional should be called if problems remain.**

WATER WELL EVALUATION REPORT FORM

SECTION A: Owner Information **District:** **County:** **Well Number:**

Property/System Owner:	**Tel 1:**	
Person requesting Evaluation:	**Tel 2:**	
Property/System Address:	**City:**	**Zip Code:**
Subdivision Name/Restaurant Name:	**County:**	**District:**
Final Report: ☐ **Pick up** ☐ **Fax Number:** ☐ **Mail to (include address if different than above):**		

SECTION B: Purpose for Evaluation

☐ **Loan or Refinance Letter**	☐ **Health Department regulated Non-Public System**
☐ **Owner Requested, Routine**	☐ **Illness Investigation (include illness reporting form)**
☐ **Adoption, Foster, Day Care Letter**	☐ **OTHER:**

SECTION C: Well Information

Number of wells (sheet for each):	**Type of Well:** ☐ **Water Supply** ☐ **Irrigation** ☐ **Other:**	
Water Source: ☐ **Drilled Well** ☐ **Bored Well** ☐ **Spring** ☐ **Other:**		
Age of Well:	**Depth of Well: (Attach Log if Available)**	**Well Contractor (if known):**
Components Associated with System: ☐ **Storage tank** ☐ **Filter** ☐ **Disinfection Treatment** ☐ **Other:**		
Describe Any Recent Maintenance/Repairs Made To System (Did Disinfection Occur?):		

SECTION D: Septic Information (Attach Copy of On-Site Sewage System Inspection Report)

Age of System: yrs	**Type of system:** ☐ **Conventional** ☐ **Drip** ☐ **Mound** ☐ **Alt Other:**
Describe Any Recent Maintenance/Repairs Made To The System:	
Evidence Of Septic Failure: ☐ **No** ☐ **Yes, Describe:**	

SECTION E: Well Protection*

☐ **Met**	☐ **Not Met**	☐ **Not Observed**	
☐	☐	☐	Surface water is diverted away from well.
☐	☐	☐	Well cover or seal is present and intact.
☐	☐	☐	Curbing is water tight, sloping away from casing, and sufficient to prevent contamination.
☐	☐	☐	Vacuum break at all pump, hose and structure spigots.
☐	☐	☐	Wells not in service sealed and maintained
☐	☐	☐	Area clean and accessible.

**System owner should correct any deficiencies in order to improve the operation of their water supply.*

SECTION F: Well Setback Recommendations* **(Estimate Distance in Feet)**

SEWER LINES	**10′**	☐ **Met**	☐ **Not Met**	☐ **Not Observed**	**____ ft**
SEPTIC TANK	**50′**	☐ **Met**	☐ **Not Met**	☐ **Not Observed**	**____ ft**
CHEMICAL/PETROLEUM STORAGE	**50′**	☐ **Met**	☐ **Not Met**	☐ **Not Observed**	**____ ft**
PIT PRIVY	**100′**	☐ **Met**	☐ **Not Met**	☐ **Not Observed**	**____ ft**
ANIMAL OR FOWL ENCLOSURE	**100′**	☐ **Met**	☐ **Not Met**	☐ **Not Observed**	**____ ft**
SEPTIC ABSORPTION FIELD (DRIP, MOUND, ETC.)	**100′**	☐ **Met**	☐ **Not Met**	☐ **Not Observed**	**____ ft**
SEEPAGE PITS, CESSPOOLS	**150′**	☐ **Met**	☐ **Not Met**	☐ **Not Observed**	**____ ft**
SOLID WASTE DISPOSAL SITE	**1000′**	☐ **Met**	☐ **Not Met**	☐ **Not Observed**	**____ ft**

** These distances are required under DNR's Water Well Standards Act; Any setbacks not in compliance may compromise the well quality.*

Set Coordinate system to North American Datum 1983 (NAD83) **GPS Well Position:** **(Decimal Degree):**

Lat:_____ **; Long:**_____

SECTION G: Bacterial Sample Results

A water sample was taken at the time of the evaluation to test for coliform/fecal coliform bacteria. Results were shown to be ☐ SATISFACTORY ☐ UNSATISFACTORY.
See the reverse side of this form for addition explanation. *Sample Code:*

Evaluating Environmental Health Specialist:	Title:	Date:	I verify this data to be correct at the time of the evaluation. This verification shall not be construed as a guarantee of the proper functioning of this water system for any given period of time. No liability is assumed for damages that may be caused by evaluation.

A water sample was obtained from the water well serving this property for the purpose of performing a qualitative bacteriological examination. A coliform test was conducted to indicate the presence or absence of bacterial contamination. **Satisfactory** results are negative for the presence of coliform bacteria. The presence of coliform/fecal coliform is **unsatisfactory**, and the use of a positive water source should be discontinued until maintenance or repairs can be made to prevent any future contamination. This test does not include any Chemical "screening" of the water source.

The County Board of Health is not responsible for construction of individual wells. The County Board of Health does not, by any action taken, assume any liability for damages that are caused, or may be caused, by improper well construction. Furthermore, issuance of this form shall not be construed as a guarantee concerning the continued water quality from any individual well.

SKETCH: Site sketch should include distances and location of (1) property line boundaries (2) well location (3) location of all septic systems within 100' of well, including on any adjacent properties (4) permanent structures on property (5) water and sewer lines

RECOMMENDED ACTIONS:

Environmental Health Section Water Well Evaluation Report Form Definitions and Instructions

The County Board of Health is routinely asked to conduct evaluations of existing private water wells. Such evaluations shall be based on a site visit and the collection of a water sample to determine the safety of an existing nonpublic or individual well as a water source. Public Health-EHS conducting the evaluation should document their findings by completing this form to verify the status of system at the time of the evaluation. Please use the following definitions and instructions when completing this evaluation form.

Section A through C Owner and Well Information

Sections A and B may be filled out by the owner or applicant. Wells can be shared, so the person requesting service may differ from the owner of the well. When a well owner performs the sampling please have the applicant use the Homeowner Well Evaluation Form and the Illness Report Form. Forward these forms to the Department.

In Section C, please note that wells used for irrigation also fall under DNR's Water Well Standards Act. The following definitions are to be used:

Drilled Well any well excavated by rotary or percussion, hydraulic drilling, having a casing that extends from ground surface through an impermeable formation to an aquifer where adequate capacity is obtained. Usually the casing is smaller in diameter (2" ~ 6") and is sometimes referred to as a "deep well".

Bored well means any well excavated by an earth auger in which the casing extends from the ground surface to the aquifer. Usually these wells are 24" in diameter or greater and are referred to as "shallow wells".

Components – The water sample should be taken at the well, or "point source", before the distribution system (storage tank, filters, treatments units, etc.). These components can compromise water quality, but this evaluation is for the protection of the well, not "point of use" components.

Section D Septic Information

Please include the Onsite Sewage Management Inspection Report to determine if required setbacks have been met. Septic systems on any adjacent properties must also be considered when determining all septic setbacks.

Section E Well Protection

These areas of well protection are requirements found in DNR's Water Well Standards Act of 1985, revised 2001 (O.C.G.A. 12-5-120 ***et seq.***) and DPH's Rule Chapter 290-5-55 Drinking Water Supply. If any items in this table that are not applicable to the well being evaluated, mark the appropriate "Not Observed" box(s).

"Surface water is diverted away from well" 12-5-134 (1)(B) The well should be located as far removed in a direction opposite to groundwater flow as the general layout of the property and surroundings allows. Avoid low lying areas and depressions where standing

water is likely to accumulate around the well.

“Well cover or seal is present and intact” 12-5-134 (1)(J) The upper terminal of the well shall be protected by a sanitary seal or cover to prevent entrance of pollutants to the well.

“Curbing is water tight, sloping away from the casing, and sufficient to prevent contamination” 12-5-134 (1)(R) All individual and nonpublic wells shall be curbed at the surface by the owner with water tight curbing… sloping away from the casing.

“Vacuum break at each spigot” DHR Rule 290-5-55.03 (6)(7) No outlet from a water supply shall be installed or maintained so that back siphonage is possible.

“Wells not in service sealed and maintained” 12-5-134 (6)(A)(B) Temporarily abandoned and abandoned wells shall be sealed and the well maintained whereby it is not a source or channel of contamination or pollution when not in service.

“Area clean and accessible” 12-5-134 (1)(c) Every well shall be located so it will be accessible for cleaning, treatment, repair, testing, inspection, and such other maintenance as may be necessary. The area should be clean of debris and infestation.

Section F Well Setback Requirements

In order to reduce risks of contamination and prevent any potential for polluting, the Water Well Standards Act requires these setbacks found in this Section. The well should maintain certain minimum horizontal distances from these setbacks. Mark this form as Met, Not Met, or Not Observed. Please note that “Chemical/Petroleum Storage” includes items such as fertilizers, pesticides, and fuel tanks. These items are often stored in well houses and should be brought to the attention of the well owner as unsafe.

GPS Well Position
Please set the map projection coordinate system to North American Datum 1983 (NAD83) and record the wayward point for the well location in Decimal Degrees Format. GPS units can display in many coordinate systems and formats, so please check that you are using the designated format before recording waypoints. Under the Settings is a function to change formats, if needed. See the GPS’s manual for details.

Section G Bacteria Sampling

A water sample will be taken to perform a qualitative coliform/fecal coliform test. Satisfactory results are negative for the presence of coliform bacteria. The presence of coliform bacteria is unsatisfactory, and the use of a positive or unsatisfactory water source should be discontinued until maintenance or repairs can be made to prevent any future contamination.

Sampling Procedure:

1. The sample should be taken from an outside spigot to avoid running unnecessary water into the septic system.
2. Run water for several minutes ensuring that the sample comes from the source. If possible, the sample should be taken before it enters a storage tank, distribution system, or point of use filtration/treatment system.
3. Sanitize spigot or faucet prior to taking the sample. Sanitizing may include utilizing either alcohol swabs or flame. If present, the aerator and vacuum break should be

removed. Please note that the vacuum break may require a tool for removal.

4. A sterilized sample bottle must be used. Do not touch the inside of the bottle or lid. Do not allow dirt or debris to contaminate the bottle.
5. Take the sample, filling bottle to 100 ml line. If this is a recheck, a DPD pool test kit can be used to verify any residual chlorine still present.
6. Close bottle, once again, keeping sure not to contaminate sample.
7. Sample must be sent to Public Health or certified lab within 24hrs.

Homeowner shall be notified immediately of any unsatisfactory results. Individuals should be advised not to use the well for drinking or cooking purposes. Chlorination instructions should be provided in order to disinfect the well. It is recommended that over the next several weeks two additional samples are taken and are satisfactory. Repeated chlorination and/or a well professional should be called if problems remain.

COLLECTING WATER SAMPLES
STANDARD OPERATING PROCEDURES

1. Carefully remove aerator screen or other devices attached to faucet.

2. Turn on the cold water and allow water to run for two to three minutes to ensure that the pump comes on and freshly pumped water is in the system.

3. Sterilize the outer surfaces of the faucet by flaming with a propane torch or cotton balls soaked in alcohol.

4. Turn on water without touching water contact surfaces of the faucet.

5. In a sterilized bottle, collect 100 mL of water leaving the top of the bottle open as short a time as possible. Be sure not to touch the interior of the bottle or top. Replace the top and tighten securely.

6. Fill out sample form **COMPLETELY**. If you have Global Positioning System equipment place the coordinates on the sample form.

7. Contact Primary lab. Check their operating status. If the Primary lab is unavailable, contact a secondary lab. Note: EHS may have incubators for samples.

8. Submit sample as requested by lab.

9. If sample is part of an area survey, locate on map and indicate sample number. Sample number and name should be entered in sample log and lab results entered when they are received.

10. Notify responsible party of results and if necessary, provide instructions on corrective actions.

WATER SAMPLE LOG
INSTRUCTIONS

1. Enter month and county name in the spaces provided in the header section.

2. Enter the day of the month in the date cell.

3. Enter the sample number in the sample # cell. You must establish a system of numbering samples so that no duplication of numbers occurs.

4. Enter the name of the well owner or system name in the upper half and the telephone numbers of the responsible person in the lower half of the name cell.

5. Enter the street address or the road name and mailbox number in the upper section and the global positioning coordinates in the lower section of the address cell.

6. In the well cell enter the type of well; **D**rilled, **B**ored, **D**ug, **S**pring; the diameter of the well in inches; and the depth of the well if known.

7. In the sample type cell indicate whether this is an **I**nitial sample, or a **R**epeat sample include a number to indicate if this is the **2**nd.or **3**rd., etc. sample taken of this supply.

8. In this cell indicate whether this system has been previously chlorinated or not by using **Y**es or **N**o.

9. When the laboratory results are received, they should be entered in the upper section of the results cell and the date the analysis was completed in the lower portion of the cell.

10. In the date notified cell you should enter the month and day that the results were given to the owner of the well or system.

11. If the results of the sample are positive, the date that the well is chlorinated by a Health Department employee or written instructions on proper chlorination techniques are given to the owner of the system or well should be entered in the appropriate column of the chlorinated cell.

12. If this sample is positive a date to re-sample the supply should be established at the time that the results are given to the owner and entered in this cell.

ENVIRONMENTAL HEALTH WATER SAMPLE LOG

Health District: ***County:***

Date	*Sample #*	*Name*	*Address*		*Well*			*Sample Type I.R.*	*Well Previously Chlorinated*	*Results*	*Date Notified*	*Date Chlorinated*	*Inst. Given*	*Re-Sample Date*
		Telephone #	*N*	*W*	*Type*	*Size*	*Dept*		*Yes No*	*Date*				

EHER Form Wat112

REGULATED FACILITIES AND WATER OUTAGES
STANDARD OPERATING PROCEDURES

(Flooding, Loss of water pressure, Extended power outages, Break in water line, "low pressure events", Repairs or Construction)

Ensuring safe, potable water in an emergency/disaster situation is a critical function of environmental health. Safe drinking water may include boiled (cooled to a safe temperature), bottled or treated water, depending on the hazard. Natural disaster events such as floods or water main interruptions may render water unsafe to drink and environmental health may be asked to provide guidance to regulated facilities such as foodservice establishments, Tourist Accommodations and Public Pools. All regulated facilities should be encouraged to have an emergency plan approved by the health authority that addresses safe water during an emergency event. Refer to Annex C "DPH Regulated Guidance for Contaminated Water" for more information. During disaster recovery operations, food service establishments may require a re-opening inspection after having to close due to unforeseen reasons such as a power and/or water outage. Refer to Attachment C for the "Emergency Re-opening Inspection Form for Food Service Establishments after a storm".

Imminent Health Hazard.
An imminent health hazard may exists because of an emergency such as a fire, flood, interruption of electrical or water service for two (2) or more hours, sewage malfunction, misuse of poisonous or toxic materials, onset of an apparent foodborne illness outbreak, gross unsanitary occurrence or condition, or other circumstances that may endanger public health, then operations are immediately discontinued and the Health Authority is notified.

How should EHS respond to an imminent health hazards when regulated facilities temporary lose potable water supply due to flooding or some other unforeseen reason?

EPD issues three types of orders for Emergency Water Interruptions:

1. Do not use
2. Do not drink
3. Boil Water Advisories/Notices

Do not use/Do not drink orders are issued when the water contains a chemical contaminant that cannot be removed by boiling. In this case, bottled water or water from an approved source must be used for all drinking (including baby formula and juice), brushing teeth, washing dishes, making ice and food preparation until further notice.

During a Do Not Drink/Do Not Use Advisory, the following guidelines should be followed:

Do not drink, brush teeth, bathe, shower in or swim in the water

Do not wash clothes or wash dishes

Do not let pets drink or bathe in the water

Do not boil the water – boiling water may release more toxins in the water.

Regulated facilities that wish to continue service during this type of order shall have a preapproved emergency water plan in place. This means that the facility must demonstrate that it has a contractual supply of potable water to meet the demands of its operation. This could include the following:

1. A supply of containers of commercially bottled drinking water;
2. One or more closed portable water containers;
3. An enclosed vehicle water tank;
4. An on-premises water storage tank; or
5. Piping, tubing, or hoses connected to an adjacent approved source.

Approval of an alternate source of potable water should be granted by the District Medical Director. An alternate water supply shall not exceed 7 days unless renewed by the District Medical Director.

Boil water advisories are issued when an event has occurred allowing the possibility for the water distribution system to become biologically contaminated. An advisory does not mean that the water is contaminated, but rather that it could be contaminated; because the water quality is unknown, customers should assume the water is unsafe to drink and take the appropriate precautions. Boil water notices are issued after a biological contaminant has been confirmed by laboratory testing.

Notification

The local water authority is tasked with the responsibility to notify the public of a water interruption, which includes boil water advisories/notices. Public Health and healthcare facilities should also be primary contact partners that are contacted immediately. The county Environmental Health manager should maintain a close relationship with the local water utilities and be included on the email and phone roster should a water interruption occur. The county EH manager with support from the District EH Director may utilize available mass communication software to proactively alert EH Facilities within the affected water interruption areas. The DPH EH Facilities application may also help with identifying a list of the facilities within a defined area for follow-up. The state EH office may also assist with mass messaging upon request.

Food Service Establishments

Foodservice rule 511-6-1-.03(2) (n) [on page 32] addresses this issue. It states *"If an imminent health hazard exists because of an emergency such as a fire, flood, interruption of electrical or water service for two or more hours, sewage malfunction, misuse of poisonous or toxic materials, onset of an apparent foodborne illness outbreak, gross unsanitary occurrence or condition, or other circumstances that may endanger public health, then operations are immediately discontinued and the Health Authority is notified.* ^{P} *However, establishments may continue to operate under an emergency operation plan that has been approved by the Health Authority prior to the occurrence of such emergency events.*^{Pf}*"*

I. Assessment

In the event of an emergency involving a contaminated water supply, appropriate food establishment responses must be taken after an assessment of multiple factors including but not limited to:

 The complexity and scope of food operations,
 The onset and duration of the emergency event,
 The impact on other critical infrastructure and services; and
 The availability of alternative procedures that can be used to meet Food Code requirements.

A food establishment manager (or the "Person-in-Charge") is responsible for conducting both initial and ongoing assessments to ensure consistent compliance with food safety requirements.

II. Response

The following are temporary alternative procedures that can be taken to address specific affected food operations during a biological contamination of the water supply (boil water advisory). Where "boiled" water is indicated, the water must remain at a rolling boil for at least **one** minute. Although chemicals (e.g. bleach) are sometimes used for disinfecting small amounts of household drinking water, chemical disinfection is generally not an option for food establishments because of the lack of onsite equipment for testing chemical residuals. Each facility needs a written plan outlining the alternative procedure they will implement during a boil water advisory. The following information may be used by the establishment to develop their plan and provides immediate guidance to EHS should a water interruption occur.

Affected Operations

Drinking Water

Alternative Procedures

 Use commercially bottled water and/or water that has been boiled for at least one (1) minute

And/Or

 Haul water from an approved public water supply in a covered sanitized container

And/Or

 Arrange to use a licensed drinking water tanker truck.

Beverages made with water – including post mix carbonated beverages, auto-fill coffee makers, instant hot water dispenser, juice, tea, etc.

Alternative Procedures

 Discontinue use of post-mix carbonated beverage machine, auto-fill coffee makers, instant hot water heaters, etc. using auto-fill.

Additional safe drinking water information can be found at the following website: https://www.epa.gov/ground-water-and-drinking-water/emergency-disinfection-drinking-water.

Ice Making

Alternative Procedures

 Discard existing ice.

And

 Discontinue making ice

 Use commercially manufactured ice from an approved water source.

Preparing food products requiring water
Alternative Procedures
- Discard any ready-to-eat food prepared with water prior to the discovery of the contamination
- Prepare ready-to-eat food using commercially bottled or boiled water.

- Limit the menu to ready to eat items or cook to serve items with limited to no preparation.

Washing / Soaking produce

Alternative Procedures
- Use pre-washed packaged produce
- Use frozen/canned fruits and vegetables

And/Or

- Wash fresh produce with boiled, commercially bottled water, or safe potable water hauled from a public water supply system.

Thawing of frozen foods
Alternative Procedures
- Thaw only in the refrigerator or as part of the cooking process.

Cooking
Alternative Procedures
- Use commercially bottled water

And/Or

- Haul water from an approved public water supply in a covered sanitized container

And/Or

- Arrange to use a licensed drinking water tanker truck.

Handwashing

Alternative Procedures
- Use heated bottled water, boiled water (cooled to warm), or safe water hauled from an approved public water supply

Cleaning and Sanitizing utensils and tableware
Alternative Procedures
- Use single service utensils and tableware.

Or

- Use potable water in the 3-compartment sink. Make certain that the sanitization step is being properly conducted (sanitizer concentration/ temperature).

Spray Misting Units –used to spray produce, seafood, meat cases, etc.
Alternative Procedures
- Discontinue use of misters.

Procedures for flushing, cleaning and sanitizing after water interruption:

A food establishment that was ordered or otherwise required to cease operations may not re-open until authorization has been granted by the regulatory authority.

After either the municipality or regulatory authority has provided notice that the water supply is safe to use, the operator must ensure the following has been completed:

- Flush pipes/faucets: follow the directions of your water utility (in the newspaper, radio, or television) or, as general guidance, run cold water faucets for at least 5 minutes.
- Equipment with waterline connections such as post-mix beverage machines, spray misters, coffee or tea urns, ice machines, glass washers, dishwashers, and other equipment with water connections must be flushed, cleaned, and sanitized in accordance with manufacturer's instructions.
- Run water softeners through a regeneration cycle.
- Drain reservoirs in tall buildings.
- Flush drinking fountains: run continuously for 5 minutes.
- Ice Machine Sanitation:
  - o Flush the water line to the machine inlet
  - o Close the valve on the water line behind the machine and disconnect the water line from the machine inlet.
  - o Open the valve, run 5 gallons of water through the valve and dispose of the water.
  - o Close the valve.
  - o Reconnect the water line to the machine inlet.
  - o Open the valve.
  - o Flush the water lines in the machine.
  - o Turn on the machine.
  - o Make ice for 1 hour and dispose of the first batch of ice.
  - o Clean and sanitize all parts and surfaces that come in contact with water and ice following the manufacturer's instructions
  - o Wash, rinse, and sanitize all food contact surfaces, 3-compartment sinks and utensils.

Food Establishments utilizing a Non-Public Water Supply (privately owned well) must be 1) Flushed; 2) Disinfected as outlined in the EH Disaster Response Manual; and 3) Sampled.

Source: 2004-2006 Conference for Food Protection
Environmental Health Emergency Response Guide-Advanced Practice Center

Recovery Following a Sewage Backup

Recovery involves the necessary steps for returning to normal, safe business operations including re-opening if the facility had to close as a result of the sewage backup. Regulatory authorities may have to approve returning to regular operations; check with local requirements. A food establishment or an area within the facility that was ordered to cease operations due to an imminent health hazard may not re-open until authorization has been granted by the Regulatory Authority.

Corrective Action

Take corrective action to eliminate the cause of the sewage back-up.

1. In the case of plugged drain lines, the permit holder should consider the following:

a. Contact a service company to find and remove the obstruction.

b. Replace worn or damaged plumbing as needed.
2. If the onsite sewage disposal system is malfunctioning, consider the following:
a. Contact the local health department for permit requirements.
b. Contact a sewage pumping contractor to pump the septic tank and haul away sewage to an approved disposal site until repairs can be made.
c. Contact a sewage disposal system installation contractor to arrange for repairs.

Sewage Clean-Up

All equipment, utensils and environmental surfaces in contact with sewage must be cleaned and disinfected prior to being used or placed back into use and service. Follow the disinfectant use instructions listed on the EPA registered label, or the procedure approved by local authorities. [Note: Disinfectants identified by the food establishment for use during vomiting and diarrheal events (e.g. norovirus) would be suitable for these situations. Reference: Supplement to the 2009 FDA Food Code §2-501.11 – Clean-up of Vomiting and Diarrheal Events.]
When food contact surfaces are affected, clean and disinfect contaminated areas first and then follow with a rinse and sanitize prior to use.
Sewage clean-up procedures should include:
1. Disposal and replacement of cleaning equipment or tools that cannot be decontaminated after use for sewage clean-up activities.
2. Procedures to ensure that employees do not walk between the affected area and other areas of the establishment without removing footwear and protective clothing.
3. Adherence to OSHA rules for handling detergents, sanitizers, and other chemicals used in the cleaning process.

Employee Safety and Protection

During the clean-up process, be aware of employee safety and protection needs. Employees should immediately report to the manager any injuries or exposures during clean-up. Examples of items/procedures that may be needed for clean-up include:
1. Eye protection.
2. Rubber boots that can be washed and disinfected after use.
3. Protective clothing such as coveralls or disposable outer garments.
Require double handwashing immediately after working with contaminated materials and before engaging in any food preparation activities such as handling exposed food, clean equipment and utensils, and unwrapped single service/use articles.
Double handwashing procedures should include:
1. Clean hands and exposed portions of the arms using a cleaning compound in a lavatory that is properly equipped by vigorously rubbing together the surfaces of their lathered hands and arms for at least 20 seconds and thoroughly rinsing with clean water. Repeat.
2. Dry hands using disposable towels.
3. Use a disposable towel to turn off the water to prevent re-contaminating the hands.
Follow-up with a hand antiseptic. Clean and disinfect lavatory faucets and other portions of the lavatory after use to prevent transferring any contamination to food handlers.

General Cleaning Procedures

1. Remove any standing sewage as soon as possible and prior to starting clean-up procedures. Sewage can contain pathogens that could become a source of contamination and therefore clean-up requires disinfecting affected areas, equipment, surfaces, cleaning tools and utensils.
a. Disinfectants identified by the food establishment for use during vomiting and diarrheal events (e.g. norovirus) would be suitable for these situations or use chlorine solutions at 1000 to 5000 parts per million (5–25 tablespoons of household bleach [5.25%] per gallon of water. [Reference: Supplement to the

2009 FDA Food Code §2-501.11 – Clean-up of Vomiting and Diarrheal Events.]
b. It is recommended that you calculate solutions prior to an emergency and test surface compatibility with bleach prior to use since bleach may be corrosive to metals or incompatible with other surfaces resulting in discoloration or “bleaching.”
c. Follow product’s EPA registered label or manufacturer’s instructions.
2. Disinfect the floors, walls and other affected areas by using an approved disinfectant.
a. Certain absorbent wall and insulation materials are especially susceptible to mold and should be removed and replaced as soon as possible.
b. Clean and disinfect any utensils, equipment and surfaces in the affected area.
c. When food contact surfaces are affected, clean and disinfect contaminated areas first and then follow with a rinse and sanitize prior to use.
3. Air-dry the affected areas, utensils, surfaces and equipment.
4. Discard mop heads and other cleaning tools/aids that contacted the sewage.
5. Alternative measure: Hire a janitorial service having expertise in cleaning food establishments exposed to sewage backups.
6. Unsalvageable food, food equipment, and all single service items, packaged or unpackaged, that came in contact with sewage must be destroyed and properly disposed.

WARNING: Always use extreme caution when working on or restarting equipment with electrical components.

Tourist Accommodations

During a boil water advisory, patrons should only use water for flushing toilets. Since it is impracticable for a TA patron to boil water, it is not recommended that the water be used for personal use such as drinking, bathing, brushing teeth or washing their hands.

TA operators and owners should follow the same procedures for flushing, cleaning and sanitizing as outlined in the previous section.

Public Swimming Pools

During a boil water advisory, bathing facilities and water fountains should not be used at public swimming pools. Water may be used for flushing toilets and facilities should establish temporary hand washing stations using potable water. Public pools are disinfected and therefore generally considered safe, but management must continually test the water to ensure disinfectant residual. At a minimum, the water should be tested prior to the pool opening, during operation and after closing to ensure disinfectant residual.

Should water have to be added to the pool to “top it off” or to remove chemicals such as cyanuric acid, the pool should be shocked treated following the fecal incident guidelines.

Public Pool owners and operators should flush their bathing and drinking facilities as outlined in the previous procedure.

WASTEWATER

During a disaster event, such as major flooding, there may be a need to provide guidance concerning outdoor sewage spills to the public. This guidance can include informing concerned citizens on the health risks associated with raw sewage. Other information can involve proper methods for containment, cleaning, and disinfection.

The standard procedures and guidance for such an event are detailed in this section.

STANDARD PROCEDURES FOR CLEANING UP SEWAGE SPILLS OUTDOORS

Health Hazards

Many disease-causing agents are potentially present in raw sewage. These organisms include bacteria, viruses, fungi and parasites. Most illnesses associated with raw sewage exposure produce mild to severe flu-like or cold-like symptoms. However, more serious illnesses, such as Hepatitis A, can be contracted through direct contact (mouth, eyes, nose, and ears) with raw sewage. With respect to HIV (AIDS) and HBV (Hepatitis B), the Center for Disease Control and Prevention has stated these bloodborne diseases have not been linked to exposure to sewage and the risk is virtually nonexistent**.**

The survival of microorganisms depends on a number of factors: location, type of surface contaminated, whether disinfectants are used, and also on environmental conditions such as humidity, temperature, and sunlight. Sunlight (UV radiation) reduces the survival rate of disease-causing agents with numbers decreasing rapidly as exposure to UV radiation increases.

Since microorganisms can cause disease by entering the body through the mouth, eyes, ears, nose, or through cuts and abrasions to the skin, proper hygiene, and appropriate personal protective equipment (PPE) must be utilized when the potential for direct contact with raw sewage is possible.

The following are recommended procedures for cleaning up outdoor sewage spills

1. Contain

Control and minimize the spill. Investigate to determine the source(s) and prevent additional sewage from spilling. Use sandbags, dirt, and/or plastic sheeting to contain the spilled sewage. Keep spills contained to the site and out of gutters, storm drains, and public waterways by shutting off or not using the water. If the area in which the spill occurred is accessible to the public or domestic pets, such as a park or school, the contaminated area must be clearly marked or cordoned off to restrict access. Signs should be posted informing the public of the hazard, such as “Keep Out, Sewage Contamination**”,** until the spill cleanup has been completed.

2. Clean

Clean up the spilled sewage (both solids & liquids) and properly dispose of the waste. If the spilled material can't be recovered using hand tools, a commercial vacuum / pump truck should be called to remove all visible liquid and solid material. Small spills (< 25 gallons) can be cleaned up with a mop and a bucket whereas larger spills (> 25 gallons) should be handled by an environmental clean-up contractor or utility contractor. Affected areas can include, but are not limited to, the ground, storm drainage system, and waterways such as streams, ponds, and wetlands. Proper disposal of sewage consists of disposing of it in a permitted treatment system. Failure to respond promptly often results in much higher cost of cleanup.

Protective clothing, gloves, goggles, masks or face shield (at a minimum, rubber or latex gloves and rubber boots) should be worn when cleaning up a sewage spill. Dispose of gloves and wash rubber boots when leaving spill site.

3. Disinfect

Sewage spills require immediate attention and may **require disinfection** to accelerate and shorten the time it will take to make the site safe and accessible. When the area in which the spill has occurred is impervious, such as concrete or pavement, a chlorine/water solution (bleach) can be used to disinfect. On these hard surface areas it is safe to use a 10% bleach to water solution, or 1 part bleach to every 9 parts of water.

When spills occur on pervious areas, such as soil, and if the spill has occurred in a populated area, odor may be an issue or within 100 feet of surface water, hydrated lime should be applied to the area in place of chlorine bleach. Hydrated lime is formally known as Calcium Hydroxide and commonly known as slaked lime or masonry lime. Please note that hydrated lime is a caustic material and can be dangerous to handle and apply. Lime should only be used or applied by people experienced in using this material. The lime should be sprinkled onto the spill so the spill is dusted mostly white on the surface. If the residue is thicker in some places use a rake to mix the lime and the residue. Enough hydrated lime should be applied to raise the pH to at least 12. The pH should stay at 12 for at least 2 hours. You can test the pH by using litmus paper obtained at a chemical supply facility. After a day, rake up the thicker residue. If there is still white lime dust visible on the soil or turf, water it in until the white dust is gone.

Do not mix cleaning/disinfecting products or chemicals. Cleaning products can react with one another to produce toxic vapor or liquid substances.

After the spill area has been disinfected and the site has dried (7 days after the chlorine solution or hydrated lime has been applied), the barriers and signage may be removed and access to the area restored.

NON-SEWERED TOILET
STANDARD OPERATING PROCEDURES

The availability of clean, safe, and sanitary methods of disposing of human wastes is a major problem after a disaster such as a hurricane or earthquake. Before the occurrence of a disaster in your area, steps must be taken to assure that this problem is handled in a planned and well-executed manner.

You may be asked to assist with identifying a source or sources of portable toilets in the area that can supply large numbers of units and has the equipment to service them daily.
Letters of agreement to supply the projected number of units should be negotiated and signed between the County and the provider. These letters should state that the provider will supply the agreed upon number of units to the County at the price rate in force for that size contract before the probability of a disaster occurring. They should also state that all waste shall be disposed of in such a way as to comply with all rules, regulations, and laws governing such operations. (If asked to assist, work with the local EMA.)

Identify potential locations for setting up portable toilets. Locations considered should be near areas where large numbers of people are expected to be after the hurricane such as planned food or water points of distribution sites, designated shelters, and locations where emergency assistance and recovery operations are provided.

1. All non-sewered toilets set up as the results of a disaster must be provided and serviced by a company that is Certified by DPH and approved by the local Health Authority. The contractor must provide documentation that all waste from such units will be transported and disposed of in a manner that is in compliance with all applicable rules, regulations, and laws.

2. The location of non-sewered toilets should be such that every person affected by the disaster will have access to a functional, clean toilet within a reasonable walking distance. Toilets will be located in areas that are clear of fallen or damaged power lines or trees, have clear walkways in the immediate area, and have passable roads to allow service vehicles to reach the toilets. Where possible, exterior lighting should be provided to insure safety during hours of darkness.

3. The number of toilets shall be such that one will be available without a lengthy wait and that they can and will be serviced as necessary to prevent overflowing.

4. The toilet units shall have the name of the company that owns and / or services them along with a unit number / letter or combination that is unique to that unit for identification purposes.

5. All agencies or companies providing and/or operating non-sewered toilets shall provide Public Health with the location of their units along with the name or names and telephone numbers of employees that can be contacted at any time concerning the servicing of the units.

6. All units will be inspected daily and the inspection information recorded on the non-sewered toilet inspection report. The EHS will note the time that the inspection was completed and sign the form. He will then post the report in a conspicuous place on or near the units if possible. If an employee of the contractor is at the site, the EHS will discuss any violations with him and establish a plan of correction that includes actions to be taken and time of completion. If an employee is not at the site the EHS will notify the environmental shift supervisor of any violations and he/she will then contact the contractor to obtain corrective action.

7. If a unit is at capacity or unusable for some reason, the EHS will notify the responsible party to take the unit out of service by placing a “Do Not Use” placard on the unit. The placard will have the reason written on it along with the date, time and signature of the responsible party. The inspection report will reflect the unit(s) taken out of service.

8. The "Do Not Use" placards are to be removed only by the operator servicing the unit(s). Records of the corrective measures taken along with the date and time are to be turned over to the facility supervisor or responsible party on a daily basis. These records should remain available for the EHS to review upon request.

9. The failure of a contractor to keep units cleaned, serviced, and stocked with supplies could lead to the suspension or revocation of his permit and the cancellation of his contract to provide services.

10. Document the cost of the program so that the county can file a request for reimbursement with FEMA. Remember to include costs incurred by the department as well as the cost of the contract with the provider.

ENVIRONMENTAL HEALTH INSPECTION REPORT
NON-SEWERED TOILETS

Health District: ***County:*** ***Date:***

Site Name: ***GPS: Lat*** ***Long*** ***Time:***

Street Address: ***City:*** ***Zip Code:***

Agency:

Contact Person: ***Telephone:***

Contractor: ***License #:***

Contact Person: ***Telephone:***

Number of Units Inspected: _____

☐ Satisfactory **Unit #**_____ _____ ☐ am ☐ pm

☐ Unsatisfactory **Unit #**_____ _____ ☐ am ☐ pm

Unit #	*Full*	*No Supplies*	*Dirty*	*Bad Repair*	*Taken Out of Service*	*Sticker #*	*Released*	*Comments*

*Corrective Action*_____
_____
_____
_____
_____

Disposal Site: ***Agreement Date:***

Inspected by: ***Discussed with:***

ENVIRONMENTAL HEALTH INSPECTION LOG
NON-SEWERED TOILET SITE LOCATIONS

Health District: ***County:***

Set-up Date / *Closing Date*	*Location Street Number and Name School/Shopping Center*	*Number of Units*	*Contractor/Provider Name/Local Address Local Contact*	*Telephone Number Corporate Office* / *Local*	*Service Frequency Schedule*	*Disposal Site*

EHER Form LU114

SOLID WASTE MANAGEMENT
STANDARD OPERATING PROCEDURES

Natural disasters such as hurricanes, earthquakes, and floods generate volumes of solid wastes almost beyond the scope of the imagination. Plans to deal with the problem need to be comprehensive, detailed, and innovative.

The Georgia Department of Natural Resources (DNR) serves as the coordinator for ESF#3, Public Works, and will assume primary responsibility for coordination among ESF#3 primary and support agencies. The Georgia Department of Transportation along with local Public Works Departments are tasked with removal and disposal of debris, as appropriate, to provide emergency access to disaster areas or to assist in eliminating health and safety problems associated with debris. Environmental Health may assist with public health messaging, general information, and investigating complaints.

An inventory of agencies, governments, and companies that are currently involved with solid wastes management should be created. It should include the resources of each, along with the name and telephone number(s) of a contact person. EH may assist with the following:

1. Contact the local Emergency Management Agency, along with governmental representatives and ESF #3, Public Works to identify potential locations that can be used as temporary storage sites for rubbish such as trees, building materials, and household waste that does not contain food products. This task must be completed and integrated into the community disaster plan in order that rubbish cleared from streets and highways during the re-entry operations can be taken to an identified storage site and will not have to be handled unnecessarily. Sites should be located throughout the community to reduce hauling time and some of them need to be near the major highways that will be used by relief and recovery personnel. Geographical features like rivers and flood prone areas need to be kept in mind because they might limit access to a potential site.

2. Work with the County to prepare maps showing the locations of identified temporary storage sites and have them copied for distribution to the re-entry personnel that will be clearing roads and highways back into the disaster area. Maps should show a number of alternative sites equal to one-half of the primary sites.

3. Prepare information on handling of wastes for distribution to the media and residents as they return to the area. These could be provided to the occupants of shelters so they would know what to do when they start there clean up upon returning home.

4. Try to determine the amount and type of wastes generated and the method by which it was disposed of. This should be recorded and reported to emergency management agencies in order to enable them to better plan for similar occurrences in the future.

5. Maintain contacts with local, state, and federal agencies involved with these activities in order to coordinate activities to improve efficiency.

ENVIRONMENTAL HEALTH INSPECTION REPORT
SOLID WASTE

Health District: ***County:*** ***Date:***

Event: ***GPS: Lat*** ***Long*** ***Time:***

Street Address: ***City:*** ***Zip Code:***

Agency:

Contact Person: ***Telephone:***

Service Provider: ***License #:***

Contact Person: ***Telephone:***

Number of Units: ***Size:***

Number of Units Inspected: _____ Condition: ☐Satisfactory ☐Unsatisfactory

Corrective Action:

_____
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Inspected by: ***Discussed with:***

EHER Form LU115

COMPLAINT \ INCIDENT REPORT INSTRUCTIONS

The Complaint\Incident Report Form is used to record the receipt of a complaint or notification of an incident that needs to be investigated and assigned to an EHS for response.

It identifies the source of the complaint or report, tells what type of complaint or incident it is, gives the location and a brief description of the problem to be investigated, and identifies the EHS that is assigned to investigate or respond to the call. It also assigns a control number that is used to track the response to the call.

The EHS investigates the complaint and records his/her actions in the disposition section giving a brief description of conditions found, corrective measures recommended or ordered. If the call is referred to another agency, document the name of the agency, date of referral, and the contact person.

The EHS will sign and date the form. If a follow-up action is indicated the EHS should include a proposed date in the narrative.

The program supervisor will review the report and close the file if no further action is needed, or designate a follow-up date to continue actions necessary to satisfactorily conclude the case. He or she should support the time frame suggested by the initial investigator unless he or she feels that an earlier date is appropriate. If so he or she should notify the EHS immediately.

THIS FORM WILL BE USED FOR SEVERAL ENVIRONMENTAL HEALTH PROGRAMS

ENVIRONMENTAL HEALTH
COMPLAINT/INCIDENT REPORT

Health District: ***County:*** ***Date:***

Complainant's Name: ***Telephone #:***

Street Address: ***City:*** ***Zip Code:***

1. **Program:**
   - ☐ Food Service
   - ☐ Drinking Water
   - ☐ Sewage Disposal
   - ☐ Solid Waste
   - ☐ Vector Control
   - ☐ Swimming Pool/Recreational Waters

2. **Health Hazard:**
   - ☐ Hazardous Material
   - ☐ Sewage
   - ☐ Injury
   - ☐ Indoor Air Quality
   - ☐ Illness
   - ☐ Common Source Outbreak

3. **Complaint/Incident Location:**

   _____
   _____
   _____

4. **Complaint/Incident Description:**

   _____
   _____
   _____
   _____
   _____

4. **Assigned to:** **Date:** **Time:** _____

5. **Disposition:**

   _____
   _____

Submitted by: **Date:**

Reviewed by: **Date:**

Close record: **Follow-up date:**

EHER Form Comp116

COMPLAINT\INCIDENT LOG INSTRUCTIONS

This document is used to record the receipt of a complaint or notification of an incident, assign a unique number to it for tracking purposes, identify the unit or staff member it is assigned to, the date of the assignment, the date the initial response occurred, the date follow-up action is scheduled, and finally the date the complaint file is considered closed.

DATE RECEIVED: The date the complaint is received by Public Health. Enter as MM/DD/YY.

CONTROL NUMBER: This number will be unique to this specific call. It will consist of three digits sequentially assigned starting at 001 each date.

ASSIGNED TO: Enter the name of the staff member to whom the complaint is assigned. If an individual name is not known at this time enter, the agency and unit so follow-up action can be verified.

DATE ASSIGNED: Enter the date the complaint is given to a staff member or unit to investigate. Use the format MM/DD/YY.

RESPONSE DATE: Enter the date that the initial response occurred (inspection, interview, etc.) using the format MM/DD/YY.

RE-INSPECT DATE: This is the date that the inspector has indicated that corrections should be completed by and on which he/she will re-inspect to confirm compliance.

CLOSED DATE: Enter the date that the investigator gives indicating that the problem has been satisfactorily resolved. The file should be closed only after the supervisor reviewing the file concurs.

ENVIRONMENTAL HEALTH
COMPLAINT/INCIDENT LOG

Health District: ***County:***

Date Received	*Control Number*	*Assigned To*	*Date Assigned*	*Response Date*	*Re-Inspect*	*Date Closed*

HAZARDOUS MATERIALS

(TO INCLUDE CHEMICAL OR TOXIC RELEASES)

The field of hazardous materials is one that most health departments have not been involved with to any significant level. However, these materials pose a real danger to the people of this state and all of its counties. With tons of hazardous materials being shipped through Georgia daily, the potential for a disaster is present on any road, railroad and at any storage facility or manufacturing plant.

The Georgia Department of Natural Resources (DNR) Environmental Protection Division (EPD)- is the lead coordination agency for ESF-10, Hazardous Materials and supports the Oil and Hazardous Materials Response Annex within the National Response Framework for ESF#10.

DNR and GEMA/HS will coordinate with appropriate agencies and organizations to ensure operational readiness. DNR and GEMA/HS will develop and maintain Standard Operating Procedures (SOPs). DNR will coordinate, integrate, and manage overall state efforts to detect, characterize, contain, clean up, dispose of or minimize releases of oil, hazardous substances, radioactive materials or CBRNE weapons. DNR will coordinate, integrate and manage overall state efforts to prevent, mitigate, or minimize the threat of potential releases to the environment. DNR's Environmental Protection Division (EPD) will provide expertise on environmental effects of oil discharges, hazardous substance releases; CBRNE weapons releases, pollutants, contaminants, and environmental pollution control techniques.

As a support agency the Georgia Department of Public Health in conjunction with the Georgia Poison Center will:

Provides assistance on all matters related to the assessment of health hazards related to a hazardous materials incident and protection of response workers. Determine whether illnesses, diseases, or complaints may be attributable to exposure to a hazardous material. Establish disease/exposure registries and conducts appropriate testing. Provide information on the health effects of toxic substances. May provide assistance with sampling water supplies when they are suspected of being contaminated by a pollutant or hazardous material.

The DPH EH Chemical Hazards program serves as a resource to District and Local EH staff when questions arise regarding the health effects of chemical exposures.

A recent example of this support occurred in January 2013 in Crisp County, Georgia after an explosion occurred at a local chemical company. Public Health fielded calls from concerned citizens and referred some to the Georgia Poison Center when needed.

Since Public Health is responsible for the health and safety of the public, plans should be made to respond to such a disaster. Several items are listed below which can help you plan your response actions.

1. Meet with the local Emergency Management Agency staff to discuss what hazardous materials have been identified as being present in the county or district on any given day. It is recommended to become an active member of Local Emergency Planning Commissions (LEPC).

2. Build a reference library of information on known materials. Learn what special dangers or problems these materials pose. You may be the only person locally that has information on hand. The DOT hazardous materials response book is a good start.

3. Develop contacts with management of local industries to obtain information on materials they use. They should have Material Safety Data Sheets on any dangerous materials they have or produce. These industries may be identified through the DNR hazardous waste generators lists, Georgia Department of Community Affairs, Chamber of Commerce, etc.

4. Prepare a simple fact sheet on materials identified for quick reproduction and distribution in case of an accident.

5. Include all people that you know of with knowledge or expertise in this field in your contacts file and also in your resources file in case you need them for consultation in the event of an incident. This would include agencies such as DPH Chemical Hazards program, DNR, ATSDR, CHEMTREC, OSHA, NIOSH, etc.

6. All activities concerning hazardous materials should be documented using the "Complaint/Incident Report Form" and tracked using the "Complaint/Incident Report Log."

ENVIRONMENTAL HEALTH INSPECTION REPORT
HAZARDOUS MATERIALS INVENTORY

Health District: ***County:*** ***Date:***

Name of Company: **Telephone:**

Address: **Emergency Telephone:**

Contact Person: **Telephone :(W)** **(H)**

1. Type of Facility_____

2. Primary Product _____

3. Characteristics of primary product(s):

a. Name: Formula: _____

b. Name: Formula: _____

☐ Flammable ☐ Acidic ☐ Caustic ☐ Corrosive
☐ Radioactive ☐ Explosive ☐ Gaseous ☐ Carcinogenic
☐ Eye irritant ☐ Respiratory irritant ☐ Heavier than air ☐ Reactive

4. Process components & by-products:

Name: Formula:

_____

Hazardous: ☐ Yes ☐ No
How?

_____

Name: Formula:

_____

Hazardous: ☐ Yes ☐ No

How?_____

7. What in-house provisions have been made to respond to a spill or fire involving these materials?

_____

_____

8. What special precautions should be taken by first persons responding to an incident at the facility?

_____

_____

9. List the locations of rescue and response materials and supplies located at the facility?

a. Material:_____

Location:_____

_____

b. Material:_____

Location:_____

_____

10. List the location of the Material Safety Data Sheets for hazardous materials on the premises.

_____

_____

_____

EHER Form Haz118

Hazardous Materials Notes

Health District: ***County:*** ***Date:***

RADIOLOGICAL RESPONSE

The Georgia Radiological Emergency Plan (GA REP) has been developed on a statewide basis as an integral part of the Georgia Emergency Operations Plan (GEOP). The GEOP is an emergency operations plan for all natural and man-made disasters, accidents and incidents including the threat or actualization of conventional or nuclear war. The GA REP serves as the Nuclear/Radiological Incident Annex (Annex F) of the GEOP.

In accordance with the current Governor's Executive Order, the Georgia Department of Natural Resources-Environmental Protection Division (DNR-EPD) as Emergency Support Function (ESF)-10, Hazardous Materials, and the Georgia Emergency Management Agency (GEMA) as ESF-5, Emergency Management, have lead agency responsibility for responding to all radiological emergency situations throughout Georgia. Under the procedure established by this plan, the radiological emergency response team, a component of ESF-10, assesses the radiological conditions at the site of an incident. Based on this assessment, the Governor may declare a state of emergency. Under the statutory authority granted to GEMA, pre-established plans and procedures of state agencies and local government organizations are automatically activated and coordinated by the GEMA State Operations Center (SOC) in Atlanta or appropriate Forward Emergency Operating Center (FEOC) in the vicinity of fixed nuclear facilities or incident site. In the event of a radiological emergency, GEMA (ESF-5) has broad legal authority to take whatever actions are deemed necessary to protect the health and safety of Georgia citizens.

The Georgia Department of Public Health (DPH), Division of Health Protection, Emergency Preparedness and Response (EPR) plan addresses the Public Health response to incidents involving radioactive materials where crisis management personnel are likely to be overwhelmed quickly with mass casualties.

In response to a radiological event, EPR will play a key role in risk communication, population monitoring, disease registry, mental health services, and coordination of medical resources and volunteers. These duties will be carried out in conjunction with partner agencies at the State and Federal levels and will concentrate on supporting local response efforts. It is anticipated that a large portion of the population – both in close proximity to the event and in the surrounding areas – will desire radiological screening and medical consultation following a large-scale radiological event.

Some Assumptions will be that a State of Emergency has, or will be declared. County, District, and State Public Health personnel will be available for response and an adequate number of qualified staff or volunteers will be available to support Reception Center Operations.

What Are The Roles And Responsibilities Of Federal, State, And Local Public Health Agencies?

If a radiation incident occurs in your community, your chief executive officer (the mayor or city or county manager) is responsible for coordinating the overall local response and resources. State and local public health agencies will have many responsibilities, including

- Protecting the public's health and safety.
- Monitoring workers' health and safety.
- Ensuring provision of health and medical services.
- Ensuring safe shelters for the population.
- Ensuring the safety of food and water supplies.
    - Coordinating sampling and laboratory analysis of biological and environmental samples.
- Conducting field investigations.
    - Monitoring people who may have been contaminated with radioactive materials or exposed to radiation (population monitoring).
- Conducting or assisting in decontamination.
- Developing criteria for entry and operations within the incident site.
- Recommending disease prevention and control measures.
- Recommending management protocols for affected populations or individuals.
- Communicating necessary information to medical providers.
    - Communicate situational awareness and safety measures to the public.
- Assisting law enforcement agencies with the criminal investigation

Local health agencies may call on state health officials, who in turn may request assistance from the federal government. The Nuclear/Radiological Incident Annex of the National Response Plan explains how federal agencies will coordinate a response to nuclear or radiological incidents. Under this annex, HHS and CDC are responsible for coordinating public health aspects of the federal response to any Incident of National Significance involving nuclear or radiological material, including

- Coordinating public health and medical information.
- Convening subject matter experts.
- Assessing medical and public health status and needs.
- Assisting in the establishment of a registry for potentially exposed individuals.
- Performing dose reconstructions and long-term monitoring of populations.
- Evaluating requests for deployment of the Strategic National Stockpile.
    - Sending representatives to serve as members of the Federal Advisory Team for Environment, Food, and Health.

These services will be provided to support the affected state or states. As a general rule, during the initial stages of the incident, local and state officials should be prepared to handle the crisis without federal assistance

In the DPH State Radiological Response Plan, Environmental Health Specialists have been identified as staff that **may** be called upon to:

1. Conduct radiological surveys of contaminated individuals
2. Monitor personal decontamination efforts
3. Distribute educational information

Just in time training would be expected regarding the operation of the Public Health District's radiation monitoring equipment. The District Emergency Preparedness Office will be responsible for contacting Environmental Health Specialists and providing reporting locations, if needed. The District or State EP will also be responsible for distributing and delivering training for the proper operation of the radiation monitoring equipment for Environmental Health Specialists.

VECTOR IDENTIFICATION AND CONTROL
Standard Operating Procedures

INSECT, RODENT, AND RABIES CONTROL

1. Identify resources that will be needed to limit the adverse impact of the increased insect and rodent populations after a natural disaster.

   Resources should include entomologists to help identify the species involved and provide consultation on their life cycles as well as the preferred control measures. They often can be found at colleges or universities, mosquito control commissions, and pest control companies.

   - DPH EH Vector Surveillance and Response program has 2 Entomologists and 5 vector surveillance staff. Contact for assistance 404-657-6534

   Other resources to be located are: ULV fogging equipment, aircraft for aerial application of larvicide, equipment to construct emergency drainage projects along with experienced operators. Epidemiologist experienced in identification and control of insect borne diseases should be included in planning your programs.

   Large numbers of rodents will be displaced by rising waters and will seek shelter in houses, barns, schools or any other building or structure that remains above flood level. This creates the need for personnel that are familiar with community wide rodent control procedures. They also should be identified and consulted when planning public health programs relating to rodent control.

2. Press releases and EXAMPLE PUBLIC SERVICE ANNOUNCEMENTS providing information on insect related diseases and preventive measures should be prepared and ready for release before the storm or flood occurs. These releases should also include information on the dangers of insect stings or bites and give recommended treatment information. The medical community should be alerted to possible occurrences of insect borne diseases so that they will consider them a possibility when diagnosing and treating patients.

3. The Georgia Department of Public Health maintains 11 Emergency Mosquito Surveillance and Control Trailers that can be deployed to areas experiencing an emergency or disaster for surveillance of vector and nuisance mosquito species. **See education section for procedures on requesting this equipment.**

VECTOR IDENTIFICATION AND CONTROL NOTES

Insect and Rodent Control Notes

Health District: ***County:*** ***Date:***

Collection Date	VIAL ID	Address	City	Zip Code	Latitude (Y)	Longitude (X)	County	District	Species	Total per Pool	Trap Type

Mosquito Data Record Form
Refer to form online

Environmental Health
RABIES CONTROL PROGRAM

FOLLOW CURRENT RABIES CONTROL MANUAL AND COMPENDIUM AND UTILIZE SENDSS RABIES MODULE FOR INVESTIGATIONS

CURRENT STATUS

Health District: ***County:*** ***Date:***

The last laboratory confirmed case of rabies in each county in the District is listed below:

County	*Animal Type*	*Date*

Post exposure rabies treatment in District_____ Unit _____ can be obtained at the following locations.

Name of Facility	*Address*	*Telephone Number*

County	*Agency*	*Address*	*Telephone Number*

Consultation on rabies activities is available from:

Georgia Poison Center
Outside Atlanta: 1-800-222-1222
Atlanta: 404-616-9000

Georgia Department of Public Health
Epidemiology and Prevention Branch
404-657-2588 After Hours: 1-866-782-4584

During disaster situations alternative labs and shipping arrangements might be needed.

Rabies Control Notes

Health District: ***County:*** ***Date:***

SWIMMING POOLS
STANDARD OPERATING PROCEDURES

1. Public pools are subject to damage or contamination during emergency events. This may be a result of flood water entering the pool, loss of power that prevents filtration, or damage from debris. Any public swimming pool that has an existing substantial and imminent health hazard shall close to bathers immediately. Items considered being substantial and imminent health hazards include the following:

    1. Disinfectant levels are less than the minimum given in the State or local code; or
    2. The pH is less than the minimum or more than maximum levels allowed in the State or local code; or
    3. The pump, automatic disinfectant equipment or other equipment necessary for continuous filtration and disinfection of the swimming pool, spa or recreational water park attraction is not working; or
    4. The water turbidity is such that the main drain cover or a standard black and white disc laying on the bottom of the deepest portion of the pool cannot be seen; or
    5. Fecal Incidents (note – the local Health Department must be notified); or
    6. Other hazards as determined by the local Health Department.

    Signs shall be posted at all entry points to the pool area indicating that the pool is closed to bathers. All gates to the pool area shall be closed and locked. Notice of closure should be reported to the local environmental health department.

2. The following procedures will govern the re-opening of the pool.

    (a) When power is restored, turn on filter, pumps, and disinfectant control devices. Record the date and time on pool operator's log.

    (b) Allow equipment to operate until the entire pool volume is cycled through the filtering system at the minimum turnover rate for the pool type. This is the pools turnover requirement. See DPH or local pool rules for determining turnover rate.

    (c) Test water for disinfectant, pH, and total alkalinity. Record time and results in pool operators log. If these tests indicate that the water is in compliance with the swimming pool regulations, call the local health department to schedule an inspection.

    (d) If the initial test indicates non-compliance, record the time and results in the pool operator's log. Adjust chemicals as needed and complete another pool turnover. Retest after second turnover is completed.

3. The pool MUST REMAIN CLOSED until written approval is granted by a representative of the local Health Department.

4. Swimming pools may be used as an emergency source of water for firefighting and flushing toilets, but should not be used for bathing or human consumption unless it has been examined by a laboratory and has met the standards for drinking water.

5. Use the Complaint/Incident Report Form to track actions in this program.

ENVIRONMENTAL HEALTH INSPECTION REPORT
SWIMMING POOLS/RECREATIONAL WATERS

Health District: ***County:*** ***Date:***

Site Name: ***Time:***

Street Address: ***City:*** ***Zip Code:***

I. SWIMMING POOL

A. Water Quality (Refer to State or Local pool code, which ever has jurisdiction)
- ☐ Disinfectant level _____ ppm
- ☐ pH Level _____ (7.2 - 7.8)
- ☐ Cyanuric acid level _____ ppm (< 100 ppm)
- ☐ Total alkalinity _____ ppm (80 ppm - 120 ppm)
- ☐ Pumps/Filtration water clear (main drain clearly visible)
- ☐ Pool clean

B. Safety
- ☐ Qualified attendant(s) on duty
- ☐ Telephone; emergency numbers posted
- ☐ Rules and regulations posted
- ☐ Lifesaving equipment
- ☐ First-aid kit
- ☐ Barriers

C. Miscellaneous
- ☐ Backflow prevention provided
- ☐ Operating instructions posted
- ☐ Valid operating permit posted. Permit #_____
- ☐ Test kit(s)
- ☐ Adequate lighting

D. Sanitary Facilities
- ☐ Maintained in a sanitary condition

II. RECREATIONAL WATER

A. Bacteriological Quality
- ☐ Recent sanitary survey performed
- ☐ Results:_____

B. Safety
- ☐ Qualified lifeguards
- ☐ Lifeguard station with proper safety equipment
- ☐ Outer safety limits visibly marked with buoys
- ☐ Adequate number of lifeguards
- ☐ Lifeguard boat with proper equipment

C. Sanitary Facilities
- ☐ Maintained in a sanitary condition

III. COMMENTS:_____

- ☐ OK to open facility
- ☐ CLOSE facility _____
- ☐ Facility NOT OPEN
- ☐ Facility OPEN _____

Report received by:_____
Inspector Signature:_____Date:_____

Swimming Pools/Recreational Waters Notes

Health District: ***County:*** ***Date:***

Environmental Health Inspection Summary Report
EMERGENCY RESPONSE DAILY ACTIVITIES (SITUATION REPORT)

Health District: ***County:*** ***Date:***

#1-8 - please fill in the blanks with the applicable number.

1. EMERGENCY FOOD SERVICE:
Feeding sites inspected: _____Feeding sites closed/suspended:_____
Meals served daily: _____

2. EMERGENCY HOUSING:
Shelters inspected: _____ Total population in shelters: _____

3. WATER SUPPLIES:
Water samples collected: Initial:_____ Rechecks:_____ Positive:_____
Bulk distribution sites: Inspected:_____ Sampled:_____

4. SEWAGE:
Portable toilets inspected:_____ Taken out of service:_____
Service trucks inspected:_____
Septic tanks inspected: New_____ Repaired_____ Hold & pump_____

5. COMPLAINTS INVESTIGATED:
Food:_____ Water:_____ Sewage:_____ Insect:_____ Rodent:_____
Housing:_____ Solid waste:_____ Standing water:_____ Dead animal:_____
Other:_____

6. ANIMAL BITES:
Investigated:_____ Heads tested:_____ Positive:_____
People treated (initial treatment): _____

7. INJURY CONTROL:
Injuries reported:_____ Fatalities reported:_____

8. PUBLIC INFORMATION:
Press releases:_____ Interviews:_____ Newspaper articles:_____

9. SIGNIFICANT PROBLEMS:

_____

_____

10. SIGNIFICANT ACTIONS/RESOLUTIONS:

_____

_____

11. ANTICIPATED PROBLEMS:

_____

_____

12. ASSISTANCE/RESOURCES NEEDED:

_____

_____

13. ACTIONS TAKEN TO MEET NEEDS:

_____

_____

Prepared by: **Title:** **Telephone #:**

COMMUNICATIONS

Communications Log Instructions

In order for the staff on duty at any site used in the emergency response effort to be able to make the best possible decisions, they must know the status of the operations when they came on duty. The communications log will provide information on activities that have taken place earlier and let them know what request for information or assistance is outstanding and which messages should have a reply coming in.

An entry should be placed in the log for every message sent or received even if the recipient is located in the EOC with Public Health staff.

The items below will help you complete the log correctly.

SITE: This block will identify the location for which the log applies. Be specific so the site can be recognized.

DATE: The date should be entered here as follows; mm-dd-yy. A separate page should be used for each day even if all spaces are not used.

TIME: The time is to be entered using military time to avoid confusion as to whether the communication occurred before noon or after. For example 1:30 PM would be entered as 13:30.

TYPE: Enter the first letter for the type of communications shown. **T**elephone, **R**adio, **F**ax, **E-**Mail, **W**ritten, **O**ral

TO/FROM: Place check in box to indicate if message is to or from the person whose name is in the name box.

NAME: Place the name of the person, agency or, organization to receive message or from whom the message was received in this box. If known give both person and agency names.

MESSAGE: Give a brief synopsis of the message. If it is maintained elsewhere in its entirety indicate location if it is known.

REPLY: Place a check in this column if a reply is requested or required in the outgoing communication.

RECEIVED: Place the date and time when reply is received in this box. This allows the staff on duty to determine the status of all messages in the log.

ENVIRONMENTAL HEALTH
COMMUNICATIONS LOG

Health District: ***County:***

Date	*Time*	*Type*	*To*	*From*	*Name*	*Message*	*Reply*	*Received*

EHER Form Com126

RESOURCE FILES

The resource file is basically a listing of all the resources in your county/district that you have identified that might be accessed in order to respond effectively to the disaster. It should answer the questions: "Where do I get .....?, Who has a.....?, Who has information on.....?, and How do you.....?". In other words, it should provide you with the answer to any question that might arise in fulfilling the obligation to protect the health of the people in the disaster area.

To create this file, you need to think about what problems might arise from each type of disaster, flood, hurricane, ice storm, fire, earthquake, hazardous material spill, airplane crash, train wreck, etc. and what you would need to respond effectively. Keep the file in several formats:

1. Computer – several computer terminals in several locations
2. Backup disk – several backup disks stored in several locations
3. Hard copy – several hard copy files stored in several locations

Make sure that numerous individuals are informed about the resource file: its location and how/when it should be used.

Resources include supplies, equipment, manpower, skills, time, and expertise.

In developing the file, contact the person that controls the resource, explain your reason for calling, and ask if he/she would be willing and able to provide assistance if called upon. If possible, get a written statement giving information on what type of resource he/she has and how much he/she can commit to disaster response. These commitments should be updated annually.

Develop a process to include in the file 24-hour contact information for each individual and/or resource.

Although this list is extensive, you will probably think of other supplies, equipment, and people you should add.

When completing this file you should be as thorough as possible since it might be used by people that have come from other areas of the state and are not familiar with local agencies.

RESOURCES FILE ITEMS

Consistency in format is an absolute necessity for this file to be useful and accurate. The format described below will produce a file that allows easy location of the resource desired. This is accomplished by alphabetically sorting the data after it is entered onto the table using the "sort" feature of Microsoft Word. The list below is not all-inclusive, but is provided as a starting point from which you can build a very valuable tool for use in your emergency response activities.

1. **AIRCRAFT** fixed wing and helicopter -- for observation fly over, search and rescue, transportation, aerial application of insecticides.

2. **BUILDING** for relocation of health Department, storage of relief supplies, feeding sites.

3. **COMMUNICATIONS EQUIPMENT** cellular phones, radios, amateur radio operators, fax machine, computer with fax modem.

4. **DATA PROCESSING** computer, copier, fax machine, printer.

5. **EXPERTISE** consultants in technical fields such as radioactive materials, hazardous chemicals, infectious diseases, insect control, toxicology, etc.

6. **FIRE FIGHTING-RESCUE** fire trucks, pumpers, ladder trucks, rescue trucks, foam trucks, diving equipment & divers.

7. **GASOLINE** available for use in state and local Health Department cars and privately owned vehicles for which the Department will pay owners for mileage.

8. **GENERATORS** for emergency lighting and refrigeration for Health Department, for wells, sewage lift stations, treatment plants, and communications equipment. Be sure that generators are compatible with their intended usage.

9. **HOUSING** for relief workers, staff, volunteers, as well as victims.

10. **PUMPS** replacement well pumps, sewage pumps, "mud hog" pumps, high volume water pumps.

11. **LIGHTS** temporary lighting equipment for use at emergency clinics, feeding sites, work areas.

12. **MATERIAL HANDLERS - LABOR** people to unload, load, and distribute relief supplies.

13. **BOATS** search & rescue, damage assessment, insect surveillance, transportation of key staff.

14. **MEDICAL EQUIPMENT & SUPPLIES**
    a. vaccines: tetanus, post exposure rabies, others as determined by clinical services.
    b. syringes: number and sizes needed to administer the above.
    c. respiratory equipment: oxygen, masks, tubing, regulators, bag-mask ventilators, and airways.
    d. program for supplying prescription medications, eyeglasses, hearing aids, replacement batteries, etc.
    e. disinfectants, Clorox, Betadine, Lysol, etc.

15. **EMERGENCY MEDICAL SERVICES**
    a. medical response team
    b. dental services,
    c. eye examinations & glasses replacement

16. **FOOD**
    a. baby food
    b. dietary supplements
    c. tube feeding formulas
    d. animal food - farm animals, pets
    e. commodity foodstuffs
    f. mass feeding supplies

17. **PERSONNEL**
    a. District Health Director
    b. Emergency Staff (Police, Fire, LEPC, EMA, GEMA, FEMA, Hazmat, etc.)
    c. Bioterrorism
    d. Environmental Health Specialist's
    e. Nurses
    f. Epidemiologists
    g. EMTs
    h. Pharmacists
    i. Physicians
    j. Dentists

18. **TRUCKS** to meet the need of the situation.
    a. refrigerated: food storage, medicine storage, temporary morgue.
    b. flat bed: to haul equipment dump- debris removal, haul dirt, road repair.
    c. compactor: garbage removal.
    d. claw: load downed trees, clear roads.
    e. fog: apply insecticide, mosquito control
    f. septic tank: pump septic tanks as needed
    g. port-o-let service truck: to empty temporary toilets
    h. boom (crane): debris removal, rescue, clear roads, etc.
    i. tanker, fuel: supply fuel for response equipment, generators.
    j. tanker, food grade: to haul drinking quality water
    k. fire: ladder, pumper, foam, rescue, hazardous materials for fire fighting, clean-up
    l. ambulance: to respond to emergencies
    m. non-emergency medical transport: to move bed-ridden patients
    n. line: repair power lines, communications lines
    o. bucket: rescue, electrical repair, building repair, tree trimming.
    p. vacuum jet unit: clean storm drains
    q. tow truck: remove derelict vehicles
    r. log: haul away usable downed trees
    s. fork lift: unload, store, distribute, relief supplies

19. **SECURITY** law enforcement agencies, National Guard, private security companies, - to protect people in shelters, tent cities, and damaged homes; protect public and private property.

20. **SHELTERS** to house evacuees and evacuees with special needs.

RESOURCE FILE INSTRUCTIONS

The words to be used as key words for sorting are given in **bold type** below.

RESOURCE

This cell will list the resource so that it can be recognized for possible use in the disaster response. Give a general identifier word for the resource and then add further information that classifies it. See the example below.

Example: **Truck, fire pumper**
Truck, fire ladder
Truck, dump

AGENCY

The entry in this cell should be in the same format as that used for the agency cell in the contacts file. Use a major identifier such as the city or county name, and then add the department or agency name. Additional information can be added as needed to adequately describe the listed resource.

Example: **Savannah, City of**
Fire Department
Hazardous Materials Unit

Georgia, State of
Natural Resources, Department of
Environmental Protection Division
Groundwater Program

CONTACT

The name of the person listed in this cell should be someone that knows the location of the resource, its availability, and have the authority to make it available for use if requested. Enter the information as follows: last name, first name, middle initial, and credentials. If a person is a Jr. or III, this should be included to make the name specific to one person.

Example: **Jones, John H., PhD**
Jones, John H. Jr.

LOCATION

This is the normal location of the resource or the operations center where it's based. It might not be at that site after the event, but the contact person will know its location and status.

Example: **Memorial Hospital**
4700 Waters Ave.
Savannah, Ga.

PRE- AND POST EVENT LOCATION PHONE

List ALL telephone numbers for the contact person's pre-event/post-event locations, such as office, home, cellular, and pager. You might have to use them if a disaster occurs after office hours or on the weekend. Ask him/her where they might be after a disaster. This might be a secondary office or the local emergency operations center (EOC).

Example: **Work - (912)651-3100**
h - (912) 897-4546
c - (912) 658-1278
p - (912) 921-6654

EOC - (912)651-3100
h - (912) 897-4546
c - (912) 658-1278
p - (912) 921-6654

ENVIRONMENTAL HEALTH
RESOURCES LOG

Health District: ***County:***

Resource	*Agency*	*Contact*	*Location*	*Pre-Event Location Phone*	*Post-Event Location Phone*

EHER Form RCN127

CONTACTS FILE

The "Contacts" file might well be the one most important file in the emergency operations of Public Health. It will be used to list and organize information on all agencies, organizations, companies, and people with which the Department has contacts whether on a day-to-day basis, occasionally, or rarely. It will also include listings on those that you identify as possible sources of help in time of disaster.

Consistency in format is an absolute necessity for this file to be useful and accurate. The format described below will produce a file that allows easy location of the resource desired. This is accomplished by alphabetically sorting the data after it is entered onto the table using the "sort" feature of Microsoft Word. The list below is not all-inclusive, but is provided as a starting point from which you can build a very valuable tool for use in your emergency response activities.

I. All government agencies in your county/district:
   A. Federal Government
      1. US Public Health Service
      2. US Department of Agriculture
      3. US Coast Guard
      4. NOAA (Weather Service)
      5. US Army Corps. of Engineers
      6. Military Installations
      7. US Park Service
      8. US Penal System
      9. National Guard

   B. State Government
      1. Department of Agriculture
      2. Department of Public Health
         a. Environmental Health
      3. Department of Human Services
         a. Division of Family and Children Services
         b. Division of Aging Services
      4. Department of Behavioral Health and Developmental Disabilities
      3. Department of Natural Resources
      4. Department of Corrections
      5. Dept of Transportation
      6. Department of Public Safety
      7. University System
      8. Georgia Bureau of Investigation
      9. Department of Community Health
         a. Healthcare Facility Regulation

   C. County and City Government
      1. Law Enforcement (Police, Fire, Sheriff)
      2. Elected Officials
      2. Administrative Office (Commissioners, Manager, Administrator)
      3. Department Heads (Public Works, Recreation, Administration, Water and Sewer, etc.)

II. Volunteer Organizations

1. American Red Cross
2. Salvation Army
3. Churches
4. Fraternal Organizations
5. Labor Organizations
6. Civic Clubs

III. Businesses

1. Transportation Companies
2. Commercial Laboratories
3. Warehouse Operators
4. Medical Supply Companies
5. Pharmaceutical Companies
6. Construction Companies
7. Heavy Equipment Companies
8. Pollution Control & Abatement Companies

IV. Individuals

1. Consultants
    a. Radioactive Materials
    b. Communicable Diseases
    c. Engineers (Civil, Structural, Electrical)
2. Special Skills
    a. Aircraft Pilots
    b. Boat operators
    c. Certified Divers
    d. Search & Rescue
    e. Amateur Radio Operators

Any other Agency, Organization, Company, Governmental Unit, or Individual that you think might be of some help in responding to and recovering from a disaster should be added to this file.

Any person or company listed should be contacted to obtain the name, title, and telephone number of the contact person. You should discuss the assistance you think they can provide and obtain their commitment to provide it. If possible, get a written verification of the commitment and place it in the appropriate programs response plan.

This file should be updated on a scheduled basis (quarterly recommended).

CONTACT FILE INSTRUCTIONS

When updating or completing this file it is very important to be consistent in the format used to enter data. This is necessary because it will be sorted alphabetically for easy access.

After you have entered the data in the table you will sort it using the "sort" capabilities of the computer. In the instructions, words that should be used as keys in the sorting process will be shown in **bold** type. Be as thorough as possible in compiling your files since time will be critical and people and resources will be hard to locate in the aftermath of the disaster.

AGENCY

List the name of the agency using a major identifying word first to group all departments and divisions of the agency together. Then list the department or division name. If you wish to include section or unit information, it would then be added.

EXAMPLE:	**Georgia, State of**	**Georgia, State of**
	Department of Agriculture	**Department of Public Health**
	Consumer Protection Division	**Environmental Health Branch**

NAME

List the name of the person serving as the point of contact with the agency. This should be done as follows: last name, first name, middle initial, and credentials. (MD, RN, PHD, etc.)

EXAMPLE: **Uhlich, Scott**
Rustin, Chris

POSITION

Give the title or position the person holds in the organization.

EXAMPLE: **Branch Director**
Deputy Branch Director

PROGRAMS

Give a brief listing of the programs the person is responsible for.

EXAMPLE: **Roads & Drainage**
Mosquito Control

PRE-AND POST-EVENT LOCATION

This is the normal working location for the person listed. Give office, home, cellular, pager numbers if known.

EXAMPLE: **County EOC**
124 Bull St.
Savannah, GA 31401
(912)651-3100
c - (912)658-5347
p – (921)658-9543

ENVIRONMENTAL HEALTH
CONTACTS LOG

Health District: ***County:***

Agency	*Name*	*Position*	*Programs*	*Pre-Event Location Phone*	*Post-Event Location Phone*

EHER Form RCN128

DIRECTORY FILE

This file is primarily information contained in the Contacts file and the Resources file which has been merged and sorted alphabetically. This will allow response personnel to locate people by their names and obtain information on their position, programs, resources, etc. and how to get in touch with them.

This format is of great value to response personnel that are from outside the immediate area and would not recognize the names of local officials and be able to associate them with the correct agency or program.

Anyone that you think might be of any assistance in your response activities needs to be included in this file.

Again, consistency is necessary for this file to be sorted accurately. You should enter the last name, first name middle initial, and then any identifiers such as MD, RN, PhD, REHS, etc.

The file should be sorted alphabetically using the name column only with the first key being the last name, the second key the first name, and the third the middle initial.

In addition to this file you should have telephone books and city directories, if available, for every county and community in your district or county.

This file should be updated at least quarterly and printed just before the arrival of a storm or flood with a printed copy of the last quarterly update on hand for use in response to an unexpected disaster such as a tornado or plane crash.

Since you will have this file on a computer disk it will be very easy to make changes as they occur and this is recommended so that you will have accurate data available.

ENVIRONMENTAL HEALTH
DIRECTORY LOG

Health District: ***County:***

Agency	*Name*	*Position*	*Programs*	*Pre-Event Location Phone*	*Post-Event Location Phone*

EDUCATION SECTION

HAND WASHING SIGNS

Wash Your Hands

After a disaster, staying clean can be hard to do. You may not have running water. But staying clean helps you stay healthy.

Things you can do to stay clean and healthy

- Wash your hands with soap and clean water. If you don't have soap and water, you can use hand cleaners with alcohol in them.
- Wash your hands many times each day.

Times to wash your hands are

BEFORE

- making food
- eating
- touching a sick person
- touching a cut, sore, or wound.

AFTER

- using the bathroom
- blowing your nose, coughing, or sneezing
- touching things that may carry germs, like
  - diapers or a child who has used the toilet
  - food that is not cooked (raw food)
  - animals or animal waste
  - trash
  - things touched by flood water
  - a sick person
  - cuts, sores, and wounds.

Recommendations from the Centers for Disease Control and Prevention

FOOD AND WATER SAFETY-CDC REFERENCE

DISASTER SAFETY

Keep Food and Water Safe after a Natural Disaster or Power Outage

Food

Food may not be safe to eat during and after an emergency. Safe water for drinking, cooking, and personal hygiene includes bottled, boiled, or treated water. Your state or local health department can make specific recommendations for boiling or treating water in your area.

Identify and throw away food that may not be safe to eat.

- Throw away food that may have come in contact with flood or storm water.
- Throw away food that has an unusual odor, color, or texture.
- Throw away perishable foods (including meat, poultry, fish, eggs and leftovers) that have been above 40 degrees Fahrenheit (F) for 2 hours or more.
- Thawed food that contains ice crystals or is 40 degrees F or below can be refrozen or cooked.
- Throw away canned foods that are bulging, opened, or damaged.
- Food containers with screw-caps, snap-lids, crimped caps (soda pop bottles), twist caps, flip tops, snap-open, and home canned foods should be discarded if they have come into contact with floodwater because they cannot be disinfected.
- If cans have come in contact with floodwater or storm water, remove the labels, wash the cans, and dip them in a solution of 1 cup of bleach in 5 gallons of water. Relabel the cans with a marker.
- Do not use contaminated water to wash dishes, brush your teeth, wash and prepare food, wash your hands, make ice, or make baby formula.

Store food safely.

- While the power is out, keep the refrigerator and freezer doors closed as much as possible.
- Add block ice or dry ice to your refrigerator if the electricity is expected to be off longer than 4 hours. Wear heavy gloves when handling ice.

Feeding Infants and Young Children

- Breastfed infants should continue breastfeeding. For formula-fed infants, use ready-to-feed formula if possible. If using ready-to-feed formula is not possible, it is best to use bottled water to prepare powdered or concentrated formula. If bottled water is not available, use boiled water. Use treated water to prepare formula only if you do not have bottled or boiled water.
    - If you prepare formula with boiled water, let the formula cool sufficiently before giving it to an infant.
    - Clean feeding bottles and nipples with bottled, boiled, or treated water before each use.
    - Wash your hands before preparing formula and before feeding an infant. You can use alcohol-based hand sanitizer for washing your hands if the water supply is limited.

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Related Resources:

- **USDA Meat and Poultry Hotline: 1-888-MPHotline.**
  Available for consumers questions and concerns about food safety.

- USDA Alert: Keeping Food Safe During Flooding and Power Outages
  (http://www.usda.gov/2005/08/0340.xml)
  USDA Food Safety Information related to Hurricane Katrina

- Hand Hygiene in Emergency Situations
  (http://www.bt.cdc.gov/disasters/hurricanes/handwashing.asp)
  When to wash your hands & how to do it without running water…

- Keeping Food Safe in an Emergency, U.S. Department of Agriculture
  (http://www.fsis.usda.gov/Fact_Sheets/keeping_food_Safe_during_an_emergency/index.asp)
  General fact sheet and FAQs on food and water safety including guidance on when to discard perishable foods

- www.foodsafety.gov - Consumer Advice: Disaster Assistance with Food
  (http://www.foodsafety.gov/%7Efsg/fsgdisas.html)
  Provides resources on food safety related to fires, floods, hurricanes, power outages, etc.

- Food Safety Information for Hurricane Aftermath, FDA
  (http://www.cfsan.fda.gov/~dms/fsdisas.html)
  Tips to help people protect their health & food supply

- Food Safety Office, CDC (http://www.cdc.gov/foodsafety/)
  Comprehensive food safety information

- Being Prepared, American Red Cross (http://www.redcross.org/services/disaster/beprepared/)
  Comprehensive site on preparing for emergencies including power outages

Water

Water may not be safe to drink, clean with, or bathe in after an emergency such as a hurricane or flood. During and after a disaster, water can become contaminated with microorganisms, such as bacteria, sewage, agricultural or industrial waste, chemicals, and other substances that can cause illness or death. This fact sheet offers the following guidance to help you make sure water is safe to use:

- Listen to and follow public announcements. Local authorities will tell you if tap water is safe to drink or to use for cooking or bathing. If the water is not safe to use, follow local instructions to use bottled water or to boil or disinfect water for cooking, cleaning, or bathing.
- Use only bottled, boiled, or treated water for drinking (however, see guidance in the Food section for infants), cooking or preparing food, washing dishes, cleaning, brushing your teeth, washing your hands, making ice, and bathing until your water supply is tested and found safe. If your water supply is limited, you can use alcohol-based hand sanitizer for washing your hands.
- If you use bottled water, be sure it came from a safe source. If you do not know that the water came from a safe source, you should boil or treat it before you use it.

- Boiling water, when practical, is the preferred way to kill harmful bacteria and parasites. Bringing water to a rolling boil for 1 minute will kill most organisms. Boiling will not remove chemical contaminants. If you suspect or are informed that water is contaminated with chemicals, seek another source of water, such as bottled water.
- If you can't boil water, you can treat water with chlorine tablets, iodine tablets, or unscented household chlorine bleach (5.25% sodium hypochlorite). If you use chlorine tablets or iodine tablets, follow the directions that come with the tablets. If you use household chlorine bleach, add 1/8 teaspoon (~0.75 milliliter [mL]) of bleach per gallon of water if the water is clear. For cloudy water, add 1/4 teaspoon (~1.50 mL) of bleach per gallon. Mix the solution thoroughly and let it stand for about 30 minutes before using it. Treating water with chlorine tablets, iodine tablets, or liquid bleach will not kill many parasitic organisms. Boiling is the best way to kill these organisms.
- Do not rely on water disinfection methods or devices that have not been recommended or approved by local health authorities. Contact your local health department for advice about water treatment products that are being advertised.
- Use water storage tanks and other types of containers with caution. For example, fire truck storage tanks and previously used cans or bottles may be contaminated with microbes or chemicals. Water containers should be thoroughly cleaned, then rinsed with a bleach solution before use.
    - Mix soap and clean water in container. Shake or stir to clean inside of container, then rinse.
    - For gallon- or liter-sized containers, add approximately 1 teaspoon (4.9 mL) household bleach (5.25%) with 1 cup (240 mL) water to make a bleach solution.
    - Cover the container and shake the bleach solution thoroughly, allowing it to contact all inside surfaces. Cover and let stand for 30 minutes, then rinse with clean water.
- Flooded, private water wells will need to be tested and disinfected after flood waters recede. If you suspect that your well may be contaminated, contact your local or state health department or agriculture extension agent for specific advice. See Disinfecting Wells After an Emergency (http://www.bt.cdc.gov/disasters/wellsdisinfect.asp) for general instructions.
- Practice basic hygiene. Wash your hands with soap and bottled water or water that has been boiled or disinfected. Wash your hands before preparing food or eating, after toilet use, after participating in clean-up activities, and after handling articles contaminated with floodwater or sewage. Use an alcohol-based hand sanitizer to wash your hands if you have a limited supply of clean water.

Related Resources

- Cleaning and Sanitizing With Bleach After an Emergency (http://www.bt.cdc.gov/disasters/bleach.asp)
- Disinfecting Wells After an Emergency (http://www.bt.cdc.gov/disasters/wellsdisinfect.asp)
- Floods (http://www.bt.cdc.gov/disasters/floods/)
- Guidelines for the Management of Acute Diarrhea (for Healthcare Providers) (http://www.bt.cdc.gov/disasters/hurricanes/dguidelines.asp)
  Increased incidence of acute diarrhea may occur in post-disaster situations where access to electricity, clean water, & sanitary facilities are limited…
- Hand Hygiene in Emergency Situations (http://www.bt.cdc.gov/disasters/hurricanes/handwashing.asp)
  When to wash your hands & how to do it without running water…

Monitor your radio or television for up-to-date emergency information.

For more information, visit http://emergency.cdc.gov/disasters/,
or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).

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GENERAL HEALTH GUIDANCE FOR FLOOD HAZARDS

1) The city's sewer treatment plant was flooded out, which has caused a huge dump of raw sewage to spill into the Chattahoochee River. What are the threats to public health when this happens?

Untreated sewage carries dangerous bacteria, viruses and parasites. Ingested, it can cause stomach and intestinal diseases; if skin is exposed for too long, irritations and infections are possible. The public should avoid flood waters.

2) What can people do to protect themselves? Do they need to boil all drinking water, what about washing their hands from the tap?

The local water authorities are monitoring public water systems and will give public notification if the water supply has been compromised and may be contaminated. The public should watch and listen to local radio and news for updated boil water advisories; the notices give the reason for its issuance and corrective actions to be taken. If individuals come into contact with flood water, washing with uncontaminated water or using a hand sanitizer is recommended.

3) Are there other public health issues when a situation like this arises?

After the boil advisory has been lifted, the affected public should be aware that they must flush the plumbing in their homes to remove any contaminated water before they begin use. Individual wells should be sampled and disinfected, if necessary. Due to saturated soil conditions, septic tank systems may temporarily malfunction requiring homeowners to conserve water use.

4) Are there other health issues that can arise from flood waters?

Flood waters may be fast moving and hide many entrapment hazards. Flash floods are a leading cause of deaths by drowning. There may also be electrical and fire hazards associated with electrical circuits and failing equipment. Additional information can be found at *www.gema.ga.gov*

What about a flooded home or basement. Is mold and mildew major concerns?

When excessive moisture or water accumulates indoors, mold growth will often occur, particularly if the moisture problem remains un-addressed. There is no practical way to eliminate all molds and mold spores in the indoor environment; the way to control indoor mold growth is to control moisture. Water must be removed as soon as possible and air flow increased. Certain items (such as carpet and fabrics) that are beyond repair should be disposed of. Semi-porous materials like plasterboards need to be evaluated whether they should be disposed of or if the can still be restored with a simple cleanup. Severe damage or long periods of saturation will require more comprehensive and more aggressive clean up.

Should people wear masks and gloves when removing damaged items or cleaning out flooded areas? What else can be done?

Potential health effects and symptoms associated with mold exposures include allergic reactions, asthma, and other respiratory complaints. Flooded areas may also have bacterial and chemical contamination. A person doing cleanup work should minimally wear a N-95 rated mask, gloves, boots and possibly goggles to protect themselves against both biological and chemical hazards. If the damage is extensive a professional should be consulted. Additional information can be found at http://www.epa.gov/mold/index.html and www.cdc.gov

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FACT SHEET

After a Hurricane or Flood: Cleanup of Flood Water

When returning to your home after a hurricane or flood, be aware that flood water may contain sewage. Protect yourself and your family by following these steps:

Inside the Home

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Remove and discard items that cannot be washed and disinfected (such as, mattresses, carpeting, carpet padding, rugs, upholstered furniture, cosmetics, stuffed animals, baby toys, pillows, foam-rubber items, books, wall coverings, and most paper products).
- Remove and discard drywall and insulation that has been contaminated with sewage or flood waters.
- Thoroughly clean all hard surfaces (such as flooring, concrete, molding, wood and metal furniture, countertops, appliances, sinks, and other plumbing fixtures) with hot water and laundry or dish detergent.
- Help the drying process by using fans, air conditioning units, and dehumidifiers.
- After completing the cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands).
    - Or you may use water that has been disinfected for personal hygiene use (solution of ⅛ teaspoon [~0.75 milliliters] of household bleach per 1 gallon of water). Let it stand for 30 minutes. If the water is cloudy, use solution of ¼ teaspoon (~1.5 milliliters) of household bleach per 1 gallon of water.
- Wash all clothes worn during the cleanup in hot water and detergent. These clothes should be washed separately from uncontaminated clothes and linens.
- Wash clothes contaminated with flood or sewage water in hot water and detergent. It is recommended that a laundromat be used for washing large quantities of clothes and linens until your onsite waste-water system has been professionally inspected and serviced.
- Seek immediate medical attention if you become injured or ill.

Outside the Home

- Keep children and pets out of the affected area until cleanup has been completed.
- Wear rubber boots, rubber gloves, and goggles during cleanup of affected area.
- Have your onsite waste-water system professionally inspected and serviced if you suspect damage.
- Wash all clothes worn during the cleanup in hot water and detergent. These clothes should be washed separately from uncontaminated clothes and linens.
- After completing the cleanup, wash your hands with soap and water. Use water that has been boiled for 1 minute (allow the water to cool before washing your hands).
    - Or you may use water that has been disinfected for personal hygiene use (solution of ⅛ teaspoon [~0.75 milliliters] of household bleach per 1 gallon of water). Let it stand for 30 minutes. If the water is cloudy, use solution of ¼ teaspoon (~1.5 milliliters) of household bleach per 1 gallon of water.
- Seek immediate medical attention if you become injured or ill.

The information in this fact sheet is general in nature and is not intended to be used as a substitute for professional advice. For more information, please contact your local health department.

For more information, visit emergency.cdc.gov
or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).

DEPARTMENT OF HEALTH AND HUMAN SERVICES
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DISASTER SAFE

Cleaning and Sanitizing With Bleach after an Emergency

Safety Tips

Use regular unscented 5.25% household bleach. Read and follow the safety instructions on the ble container's label. Never mix bleach with ammonia or any other cleaner. Wear rubber boots, rubber and eye protection. Try not to breathe bleach fumes. Open windows and doors to get fresh air.

Cleaning Recommendations

The amount of bleach to mix with water depends on what you are cleaning or sanitizing. The follov chart describes some items or surfaces that should and can be cleaned, the amount of bleach to m water, and cleaning steps for specific purposes.

Area or Item to be Cleaned	Amount of Bleach and Water to Mix		Cleaning Steps
	Bleach Amount	Water Amount	
Sanitize Drinking Water			
Clear drinking water	1/8 teaspoon (~0.75 mL)	1 gallon	1. Mix 1/8 teaspoon (~0.75 mL) bleach per 1 gallon water. 2. Add it to water. 3. Let it stand for about 30 minutes before using it. For more information see: http://www.bt.cdc.gov/disasters/foodwater.asp
Cloudy drinking water	¼ teaspoon (~1.5 mL)	1 gallon	1. Mix ¼ teaspoon (~1.5 mL) bleach per 1 gallon water. 2. Add it to water. 3. Let it stand for about 30 minutes before using it. For more information see: http://www.bt.cdc.gov/disasters/foodwater.asp

Area or Item to be Cleaned	Amount of Bleach and Water to Mix		Cleaning Steps
	Bleach Amount	Water Amount	
Water storage containers (Examples: used cans or bottles)	1 teaspoon (4.9 mL)	1 cup (240 mL)	1. Mix soap and clean water in container. 2. Shake or stir to clean inside of container. 2. Rinse container. 3. Mix 1 teaspoon (4.9 mL) bleach per 1 cup (240 mL) water and pour it in the container. 4. Cover the container and shake so the solution touches all inside surfaces. 5. Cover and let stand for 30 minutes. 6. Rinse with clean water. For more information see: http://www.bt.cdc.gov/disasters/foodwater.asp
Clean and Sanitize Food Cans and Surfaces			
Food-contact surfaces that may have touched floodwater [Examples: countertops, plates] **Note:** Throw away wooden cutting boards, baby bottle nipples, and pacifiers	1 teaspoon (4.9 mL)	1 gallon	1. Wash with soap and warm, clean water. 2. Rinse with clean water. 3. Sanitize using a mixture of 1 teaspoon (4.9 mL) of bleach per gallon of clean water. 4. Allow to air dry. For more information see: http://www.bt.cdc.gov/disasters/foodwater.asp

Area or Item to be Cleaned	Amount of Bleach and Water to Mix		Cleaning Steps
	Bleach Amount	Water Amount	
Food cans that are not bulging, open, or damaged	1 cup (240 mL)	5 gallons	1. Remove can labels. 2. Wash cans with soap and clean water. 3. Dip cans in mixture of 1 cup (240 mL) of bleach per 5 gallons of water. 4. Relabel cans with a marker. For more information see: http://www.bt.cdc.gov/disasters/foodwater.asp
Clean and Sanitize Other Household Surfaces and Items			
Surfaces that do not soak up water and that may have touched floodwater [Examples: floors, stoves, sinks, certain toys, countertops, flatware, plates, and tools]	1 cup (240 mL)	5 gallons	1. Clean surface with soap and clean water. 2. Disinfect with a mixture of 1 cup (240 mL) of bleach to 5 gallons of water. For more information see: http://www.bt.cdc.gov/disasters/floods/after.asp#cleanup 3. Allow to air dry.
Clean Mold Growth Off Hard Surfaces			
Mold growth on hard surfaces [Examples: floors, stoves, sinks, certain toys, countertops, flatware, plates, and tools]	1 cup (240 mL)	1 gallon	1. Mix 1 cup (240 mL) of bleach in 1 gallon of water. 2. Wash the item with the bleach mixture. 3. If the surface of the item is rough, scrub the surface with a stiff brush. 4. Rinse the item with clean water. 5. Dry the item or leave it out to dry. For more information see: http://www.bt.cdc.gov/disasters/mold/protect.asp

For more information, visit emergency.cdc.gov/disasters,
or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).

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MINIMUM NUMBER OF PORTABLE SANITATION UNITS AT CONSTRUCTION SITES

Number of Workers*	Minimum Number of Units If Serviced Once a Week**
20 or less ….	1
20 or more ….	1 Toilet and Urinal per 40 Workers
200 or more ….	1 Toilet and Urinal per 50 Workers

29 CFR 1926.51 OSHA Regulations for Toilets at Construction Sites

***** The number of portable sanitation units required shall be determined by the maximum number of workers present on a regular shift.

****** "Servicing" refers to the emptying of waste and the cleaning of the portable sanitation unit.

Portable Sanitation Units for Special Events Planning*

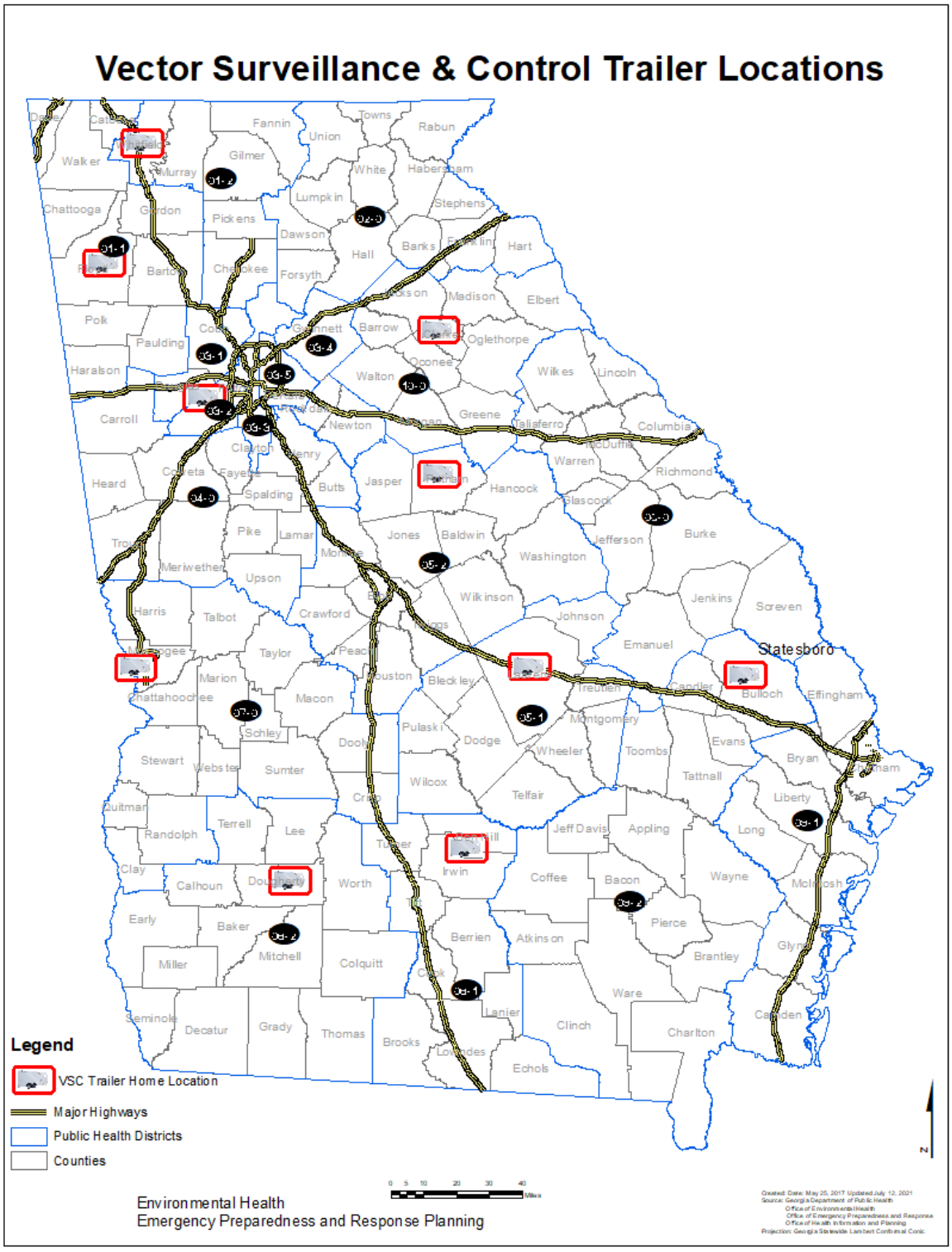
PEAK CROWD NUMBER OF PEOPLE	MINIMUM NUMBER OF UNITS REQUIRED FOR EVENTS – 2 HOURS OR LESS*
1-500	2
1,000	3
2,000	5
3,000	7
4,000	10
5,000	12
6,000	14
7,000	17
8,000	20
10,000	25
12,500	28
15,000	30
17,500	35
20,000	38
25,000	42
30,000	44
40,000	48
50,000	50
75,000	75
100,000	100

***Table based on units being serviced daily**

- Determine the appropriate potable sanitation units needed form the table above.
- For each sewered toilet available onsite, subtract 1 from the previously calculated number.
- If alcoholic beverages are to be served, add 25% to the base number.
- If toilets are to be serviced more than once per day, subtract 25% from the base number.
- For peak crowd numbers that fall between chart numbers, round up to the next base number.
- For events lasting more than 2 hours, double the minimum number of required units every 2 hours of the event (i.e. An 6 hour event with a group size of 400; requires 2 portable sanitation units for the first 2 hours, 4 portable sanitation units for the next 4 hours and a total of 8 portable sanitation units for the 6 hour event).
- Additional units may be required as deemed necessary by the Health Authority.

VECTOR SURVEILLANCE AND CONTROL EMERGENCIES

Emergency Mosquito Surveillance Trailers



EMERGENCY MOSQUITO SURVEILLANCE TRAILER USE PROTOCOLS

Georgia Department of Public Health

Sample Memo

TO: GDPH Emergency Preparedness Coordinator

SUBJECT: Emergency Mosquito Surveillance Trailer Loan Request

1. NAME OF AGENCY REQUESTING SUPPORT:
2. NAME OF AUTHORIZED REPRESENTATIVE:
3. CONTACT INFO (phone, email, cell, etc):
4. BRIEF DESCRIPTION OF EVENT*:
5. LOCAL RESOURCES DEPLOYED:
6. DESCRIPTION OF NEED (personnel, equipment, materials, and supplies):
7. ESTIMATED LENGTH OF TIME TRAILER IS NEEDED:
8. LOCATION OF STAGING AREA:
9. REQUESTED DATE, TIME AND SITE FOR DELIVERY/COLLECTION OF TRAILER AND SUPPLIES:

SIGNATURE OF AUTHORIZED REPRESENTATIVE:

DATE:

*If this is for a training, please include estimated number of participants and attach a training announcement and agenda or training objectives. If to be deployed to a disaster area, please attach the declaration of emergency. Fax this request and accompanying materials either to GDPH Medical Entomologist at 404-657-5616, (training event) or the GDPH EOC (disaster event) at 404-657-0602 and contact the Public Health Emergency Planner at 404-463-2617 or the Georgia Department of Public Health 24/7 contact number at 866-PUB-HLTH (782-4584).

ENVIRONMENTAL ASSESSMENT FOR A FOODBORNE OUTBREAK

ENVIRONMENTAL ASSESSMENT BRIEF
Refer to the DPH ERP, Annex F – Foodborne Outbreak Investigation Guide

PLEASE NOTE: THIS IS NOT A ROUTINE INSPECTION.

Steps involved in conducting an Environmental Assessment

1. Plan an onsite environmental assessment investigation
- Identify the persons responsible for operating and managing the implicated facility before visiting the establishment
- Consult with your Epidemiologist on relevant information about the outbreak before you conduct an Environmental Assessment
- Alert lab personnel prior to your visit and get suggestions for samples and specimens if needed to be collected
- Coordinate with the person who has regulatory responsibilities for the establishment under investigation.
- Assemble your equipment that you may need for your field investigation including sampling, inspection and supportive equipment.
- Plan to stay in the establishment to evaluate all suspicious processes.

2. Manager interviews
- State the intent of your visit
- Attempt to create a spirit of cooperation
- Get menus, recipes information about the products prepared, product flow names of persons responsible for particular operations and other relevant records. Record information on APPENDIX 1
- Draw a flow diagram of operations on a copy of APPENDIX 2.
- Review policies related to employee health, food safety and sanitation.

3. Facility walk through
- Take a preliminary look at the entire operation to observe conditions that may have contributed to the outbreak.
- If appropriate, take relevant measurements of critical operations.
- Obtain samples of suspect foods if available before they are discarded.
- Accompany workers on a walk through the processing steps for suspect foods from receiving to service.
- Modify your flow diagram as you conduct your walk through and take notes.
- Review monitoring records if available

4. Food worker interviews
- Interview all persons separately who were directly involved in preparing the suspect foods.
- Ask questions in a sequence to reveal the flow of suspect foods.
- Get the worker's accounts of the manner by which suspect foods were prepared

ENVIRONMENTAL ASSESSMENT FOR A FOODBORNE OUTBREAK

- Review the operational manual for procedures that may have led to contamination, proliferation or survival of likely etiologic agents
- Be alert for inconsistencies in accounts of different food workers.
- Modify your flow diagram if required
- Be persistent until logical accounts are obtained.

5. Observe operations
    - Investigate sources, receiving, storing preparing cooking handling after if cooking, hot holding, cooling reheating and serving foods.
      Specifically observe the following:
        a) Evaluate the manner of receiving the suspect foods (temperature control, approved source, packaging).
        b) Evaluate the manner of storage of suspect foods.
        c) Evaluate the possibilities of cross contamination from worker's hands, gloves, cleaning aids, and from equipment.
        d) Evaluate the hygienic practices including handwashing of persons who prepare the suspect foods.
        e) Evaluate the effectiveness of cleaning and sanitizing utensils and equipment.
        f) Evaluate the procedures used for thawing frozen foods if applicable
        g) Measure product temperatures during storage, processing and record time sequences of operations.
        h) Measure temperature of suspect foods during or at the completion of heat processing or reheating.
        i) Verify the calibration of establishment's time and temperature measuring devices.
        j) Evaluate the rate at which suspect foods cool during storage at room temperature and in other cooling devices. Plot time and temperature curves for the suspect foods if applicable.
        k) Measure the pH of foods if applicable
        l) Measure the Aw of foods if applicable.
    - If applicable, investigate phases of transporting delivery storing and retailing.
    - Revise the flow diagram.
    - Note additional observations or record data as applicable.
    - Observe the likely hood of all contributory factors in the operation of suspect food. Refer to list of contributory factors on APPENDIX 3

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APPENDIX 1: FOODBORNE ILLNESS INVESTIGATION REPORT FORM

DETAILS OF SUSPECT FOOD
NOTE: COMPLETE APPENDIX 1 FOR EACH SINGLE SUSPECT FOOD

Date: _____ (mm/dd/yyyy)
Time: _____(am/pm)

Place the suspect food was prepared:
Name of the food service establishment: _____
Location: _____
Person in charge**:** _____

Information on the suspect food:

Name _____ Quantity: _____lbs
Implicated _____Yes/No
Suspect _____Yes/No
Multi -Ingredients: Yes/No (circle one)
If yes, list the ingredients:_____
_____

Internal temperature of the suspect food at time of environmental assessment _____ºF
Leftover samples available: _____yes/no
If yes, then are the samples taken: _____yes/no (choose one)
Describe what were taken
_____
_____
_____
_____
_____
_____

If no, state the reason?
_____
_____
_____
_____
_____
_____
_____

ENVIRONMENTAL ASSESSMENT FOR A FOODBORNE OUTBREAK

Date when the suspect food was prepared: _____ (mm/dd/yyyy)
Time of when the suspect food was prepared: _____ (am/pm)
Who were involved in the preparation of the suspect food?

_____
_____
_____

Were there any unusual events that occurred at the time of food preparation? (if the place was busy, food worker ill, shortage of staff, malfunctioning equipment (mechanical dishwasher) etc.). If so, please describe

_____
_____
_____
_____

Was the suspect food transported to the event where it was eaten /prepared on site where the event occurred? Circle one
If it was transported to the event where it was eaten, then how was it transported?

_____
_____
_____
_____
_____
_____

Otherwise, if prepared onsite where the event occurred was it temperature controlled for food safety after preparation before service? Yes/No

If yes, how was the suspect food temperature controlled?

_____
_____
_____

If hot held before service, then at what temperature: _____ºF
If cold held before service, then at what temperature: ____ºF

If No, then record the internal temperature of the leftover suspect food at the time of the assessment ____ºF

Note: Some of the above information may have to be collected from food worker interviews if an environmental assessment is not done at the time when the outbreak occurred.

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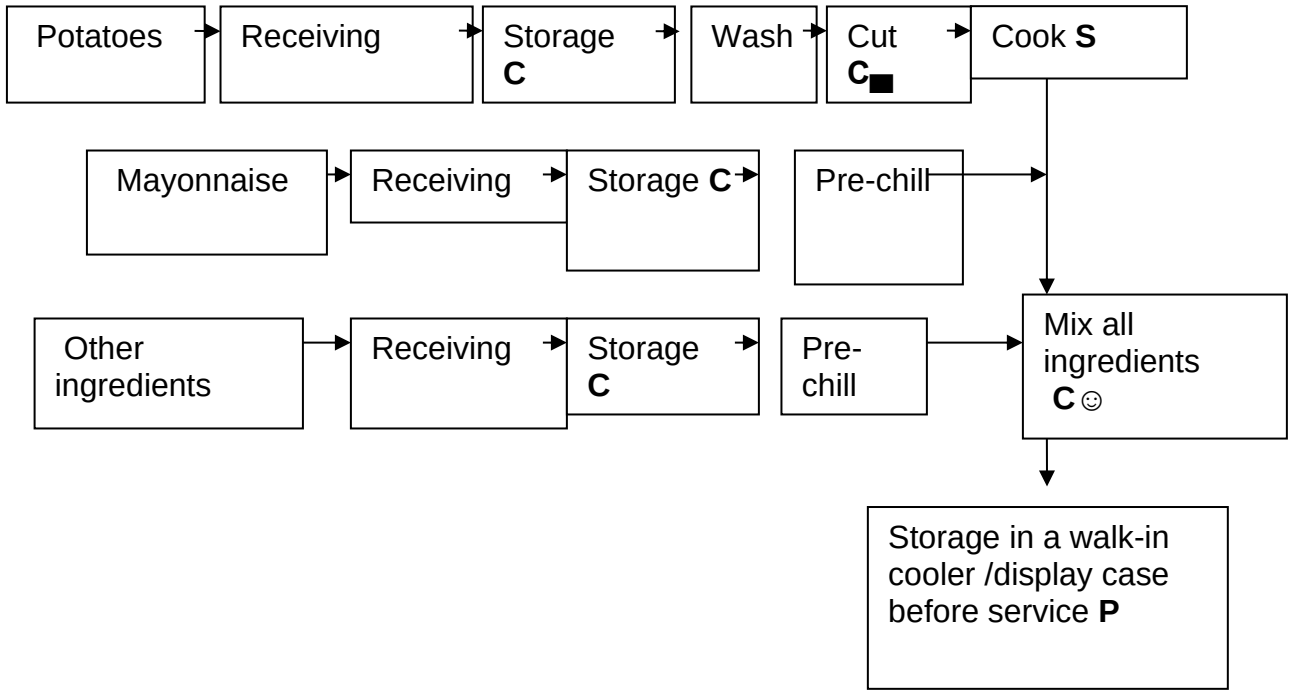
APPENDIX 2: FLOW DIAGRAM OF SUSPECT FOOD

Insert internal temperature, and appropriate symbol as listed in the table at each steps in the operation of suspect food.

Potato salad example:
Ingredients: Potatoes, mayonnaise, other ingredients



S	SURVIVE
P	PROLIFERATE
C	OTHER TYPES OF CONTAMINATION
C▲	RAW PRODUCT CONTAMINATED
C■	EQUIPMENT CONTAMINATED
C☺	PERSON CONTAMINATED

ENVIRONMENTAL ASSESSMENT FOR A FOODBORNE OUTBREAK

APPENDIX 3: CONTRIBUTING FACTORS TO THE OUTBREAK

CONTAMINATION (C)

- Toxic substance part of tissue
- Poisonous substance intentionally added
- Poisonous or physical substance accidentally added
- Addition of excess quantities of ingredients under these situations are toxic
- Toxic container or pipelines
- Contaminated raw products eaten
- Raw product contaminated by pathogens from animal or environment
- Obtaining foods from polluted sources
- Cross contamination from raw ingredient of animal origin
- Bare-hand contact by worker
- Inadequate cleaning or processing /preparation equipment/utensil
- Handling by intestinal carrier
- Storage in contaminated environment
- Other source of contamination

PROLIFERATION (P)

- Allowing foods to remain at room temperature
- Inadequate cold holding
- Slow cooling
- Preparing foods a half day or more before serving
- Insufficient time or temperature during hot holding
- Prolonged storage for several weeks
- Insufficient acidification
- Insufficient low aw
- Inadequate thawing
- Anaerobic packing /modified atmosphere
- Inadequate fermentation
- Other

SURVIVAL(S)

- Insufficient time or temperature during cooking/heat processing
- Insufficient time or temperature during reheating
- Inadequate acidification
- Inadequate thawing
- Other

ENVIRONMENTAL ASSESSMENT FOR A FOODBORNE OUTBREAK

Summarize in your own words as how do you think the suspect food might have become contaminated?

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APPENDIX 4: FOOD AND WATER RELATED ILLNESS COMPLAINT FORM

Food and Water Related Illness Complaint Form

Fax Completed form to the Georgia DHR Environmental Health Branch (404) 657-6516

Interviewer:_____
Date of Interview:_____

Name:_____
Street _____ County _____Health District _____
City/State/Zip _____ Occupation/Grade _____
Phone # _____ Work/Childcare/School_____

Date of Illness Onset:
__ __ /__ __ / _____
Mo Day Year

Numbers of:	0-10 yrs	11-18yrs	19-65yrs	>65yrs
Persons ill:				
Visits to Doctor:				
Hospitalizations:				

Illness History (Check symptoms that apply):

Diarrhea (≥3 stools/day): ____ Nausea: ____ Fever: ____ Vomiting: ____
Visible blood in stools: ____ Cramps: ____ Rash: ____ Eye Infections: ____
Ear Infections: ____ Respiratory Symptoms: ____
Other, specify: _____
Was a stool/blood sample taken by a doctor at the time of the illness? Y N
If yes, was a specific illness/pathogen identified? _____
Physician Contact Name: _____ Physician Phone #: _____

Background Information (Circle Yes or No)

Contact with someone with a similar illness? Y N DK
Names & Details: _____
Attended Large Gatherings or group meals? Y N DK
Location & Details: _____
Travel outside community? Location_____ **Y N DK**
Date Departed Home __/__/__ **Date Returned home** __/__/__
Drinking Water Source: Public Water ___ **Well Water** ___ **Bottled Water** ___
Eat out/ take out at restaurant in last 72 hours? Y N DK
Location & Details: _____
Recreational swimming in last 72 hours? Y N DK
Location & Details: _____

STATE USE ONLY: Complaint # ____ Date received first report: ___/___/___ Date Sent to State ___/___/___
Associated with Outbreak? Y N DK Outbreak # _____ Completed by _____Tel# _____

ATTACHMENT A
PUBLIC HEALTH DISASTER ACTIONS CHART

ATTACHMENTS
A: PUBLIC HEALTH DISASTER ACTIONS CHART

DISASTER	PROBLEMS	PRIMARY RESPONSIBILITIES	SUPPORT RESPONSIBILITIES
HURRICANE	Damaged or destroyed housing, contaminated or inoperable water systems, failure of sewage disposal systems, power failure, trauma from flying debris, shortage of medical supplies, mass feeding sites, animal bites, lack of refrigeration, communications	Assure safety of water and food supplies, safe mass shelter facilities, proper sewage disposal, rabies control, insect and rodent control, hazardous materials exposure, provide public information on food safety, safe re-entry into facilities	Assist in relocation of special needs population, BMS services, support other responding agencies such as Red Cross, Salvation Army, DNR, Agriculture Department, DFCS
TORNADO	Damaged or destroyed housing, trauma, electrical failure, water and sewer system failure, hazardous materials exposure, mass feeding sites, lack of refrigeration, communications	Prevention of further injuries, safety of water and food supplies, safe shelter for victims	Assist in shelter operations, BMS services, support other agencies, DNR, Red Cross, Salvation Army, DFCS, city and county governments
FLOOD	Displaced persons, housing destroyed, electrical failure, contaminated wells and water systems, failure of sewage systems, animal bites, solid waste disposal, insect and rodent control, mold and mildew in homes, trauma during cleanup, communications	Assure safe shelters, safe food at mass feeding sites, safe water, rabies control, emergency sewage disposal facilities, insect and rodent control, disease surveillance	Support agencies providing shelter, food and social services, assist in evaluating damages and planning mitigation efforts
WINTER STORMS	Power failure, lack of heat, failure of medical support equipment, failure of water and sewer systems, communications failure, food shortage due to transportation difficulties, trauma during cleanup, medical transportation failure, communications	Assure safety of shelters, water supplies, sewage disposal, public information on heating safety, public information on injury prevention, BMS services	Support agencies supplying food, shelter, blankets, medical help, and social services, assist BMA in evaluating needs and organizing response
TRANSPORTATION INCIDENT	Hazardous/ Radiological materials exposure, trauma to passengers of vehicle or plane, large number of fatalities, overload of BMS capabilities, local evacuations, communications failure, injury or exposure of responders, communications	Public information on dangers of exposure, safety of water supply, safe shelters, safe food	Support other agencies as requested
INDUSTRIAL INCIDENT	Hazardous / Radiological materials exposure, trauma to employees and responders, local evacuations, shelters, mass feeding sites, overload of medical services, communications	Public information on dangers of exposures, safety of shelters and food supplies, location of additional BMS providers, identification of victims and tracking of victims	Assist BMA and other responders in identifying needs and locating resources
HEAT EMERGENCY	Increased demand on medical facilities and BMS, possible failure of medical equipment due to power failure, increased violence, communications	Public information on heat related illnesses, shelter safety, food safety, identification of special needs population	Assist BMA and other responders in identifying needs and locating resources
ENERGY EMERGENCY	Exposure to extreme temperatures both hot and cold, failure of medical equipment for special needs population, communications failure, water and sewer systems failure, dietary problems due to inability to cook and lack of refrigeration, fuel shortage, communications	Safe water and food supplies, safe shelters, public information on safety during emergency, identification of needs and resources	Support other responding agencies as requested
TERRORISM	Damaged or destroyed housing, displaced persons, trauma, electrical failure, water and sewer system failure, hazardous/radiological materials exposure, mass feeding sites, lack of refrigeration, communication failures, hazardous materials exposure, large number of fatalities, overload of BMS capabilities, local evacuations, communications failure, injury or exposure of responders	Public information on dangers of exposures, safety of shelters and food supplies, location of additional BMS providers, identification of victims and tracking of victims	Support agencies supplying food, shelter, blankets, medical help, and social services, assist BMA in evaluating needs and organizing response

ATTACHMENT B
EH STRIKE TEAM RESOURCE REQUEST

B. EH STRIKE TEAM RESOURCE REQUEST PROCESS

The following guidelines should be used when making the decision to utilize an EH Strike Team:

1. Adjacent EH District Directors should be contacted for assistance prior to requesting Georgia's EH Strike Team support. If neighboring support will not be adequate, then a resource request should be submitted as soon as possible.
2. EH Strike Team resource requests should be submitted as soon as possible through the local resource request process to include the DPH District Emergency Coordinator (EC) and based on the available disaster information, preferably prior to local EH staff and resources being totally exhausted. An EH Strike Team fillable request pdf form (noted below) is located on the public health information library -PHIL to assist with capturing necessary deployment information.
    a. Team Deployment will be within 24 hours of the resource request approval
    b. Team member deployment availability requests are sent out via email, text or phone at the earliest indication of potential deployment.
3. Team(s) response size will depend on the available disaster information, personnel and members experience. Requests may be one or more of the following:
    a. Request a few EH Strike Team members (usually subject matter experts)
    b. Request a single team with 6 people including a leader
    c. Request a single team with a follow-up team based on the incident response needs
    d. Request multiple teams depending on the incident response needs
    e. Request variations of the above
4. The EH Strike Team Mission should be provided with the request, as much as possible, so as to provide team members with information as well as to allow for mission specific expertise if available.
5. Adequate lodging, meals and supplies should be provided for the Teams mission duration
    a. Provide the Lodging address with the request
    b. Provide the meals location address
    c. If State EPR assistance is needed for lodging and meals, this should be communicated immediately with the resource request.
6. Communicate the duration of the mission, if known
    a. The planned Team deployment mission is 7 days with one day travel on each end.
        i. Teams members may be augmented depending on availability
        ii. Teams may be replaced by subsequent teams
7. Any specialized supplies or personnel resources that may be needed to ensure a successful mission should be communicated during the EH Strike Team resource request.
    a. Communications equipment
    b. Well sampling equipment
    c. Transportation needs, flyer handouts or Other
8. Provide the address for the Team to meet at (staging area), the Incident Command or EOC address with the primary point of contact, phone numbers and email addresses for the each.
9. A reminder that all time and expenses related to the deployment of the team(s) to a disaster response should be gathered during the response for possible FEMA reimbursement.
10. Daily Situation summary reports are expected to be sent back via email to the EHEP (end of day)
11. Refer to the EH Strike Team SOG for additional information. (Public Health Information Library).
12. As the need for resources decline, the Team(s) will be deactivated, which will initiate the demobilization process, to include participation in any hot wash or after-action reviews. Team members are the responsibility of the affected jurisdiction until they have reported back into their local jurisdiction.
13. Equipment, staff and supplies should be combined into a single report for cost analysis for possible Federal reimbursement.

ATTACHMENT B
EH STRIKE TEAM RESOURCE REQUEST

EH Strike Team Request Form: PHIL-Environmental_Health_Forms

Environmental Health Strike Team
Resource Request Form

1. Agency requesting EH Strike Team support: _____
2. Authorized representative for the agency: _____
   a. email: _____ cell phone: _____
3. Emergency or disaster name: _____
4. Number of EHST staff support requested: _____ (EH Strike Team = 6-person team, includes 1 team lead)
5. Request date: _____ Time: _____
   a. Local EH point of contact (POC) name: _____
   b. EH POC Cell Phone: _____
   c. EH POC Email: _____
   d. Team staging facility name: _____
   e. Address: _____ City: _____ Zip: _____
6. Lodging name: _____ Reserved rooms (1 per team member preferred): _____
   a. Address: _____ City: _____ Zip: _____
7. EH Strike Team primary mission during deployment: (check one)
   a. Food Service reopening inspections ☐
   b. Vector surveillance and control ☐
   c. Water well sampling ☐
   d. Education, DRC support ☐
   e. Other: _____ ☐
8. Specialized equipment needed for primary mission:
   a. _____
   b. _____
9. Safety or preparedness incident specific instructions for the team:
   a. _____
10. Expected EH Strike Team Arrival date: _____
11. EH Strike Team(s) Assigned: _____

DPH Authorization, representative signature: _____

Print Name: _____

Date/Time: _____/_____

*Attach the completed form to the WebEOC resource request, call and send an email to the Environmental Health Emergency Planner: Byron.Lobsinger@dph.ga.gov cell: 404-337-0199

ATTACHMENT C
EMERGENCY RE-OPENING INSPECTION FORM FOR FOOD SERVICE ESTABLISHMENTS AFTER A STORM

C. FOOD SERVICE EMERGENCY RE-OPENING INSPECTION ADDENDUM

Public Health Information Library for online forms: PHIL-Environmental_Health_Forms

EMERGENCY RE-OPENING INSPECTION FORM FOR FOOD SERVICE ESTABLISHMENTS AFTER A STORM

Name of Establishment:_____ Permit #:_____ Date:_____

Address of Establishment:_____City/State:_____Zip:_____

Person In Charge on site:_____ Time In: _____ Time Out: _____

ELECTRICAL POWER – *If the facility does NOT have power at the time of this re-opening inspection, it must remain closed until power is restored, UNLESS they have a PRE-APPROVED Emergency Operation Plan on file with the Health Authority which outlines operations without power.*

FOOD PRODUCT SALVAGE EVALUATION GUIDELINES		
FOOD PRODUCT	**ACTION**	**EXPLANATION/INSTRUCTION**
Refrigerated TCS foods >41°F for more than 4 hours	Discard	
Refrigerated TCS foods at >41°F for less than 4 hours	Salvage	Must be iced or moved to a properly functioning refrigerator unit and cooled to 41°F within 1hr OR served within 1hr.
Frozen foods that remained frozen and did not thaw	Salvage	
Partially thawed frozen foods that remained under 41°F	Salvage	Must be moved to a properly functioning refrigerator unit and cooked immediately
Improperly cooled or hot held foods	Discard	Food in the 41°F - 135°F temperature range can produce dangerous pathogens and toxins

1. Did establishment lose electrical power?

☐ Yes: Date restored: _____ Time restored: _____ ☐ No ☐ Unknown (when in doubt, throw it out!)

2. Are all refrigeration units holding TCS foods at 41°F or below? ☐ Yes ☐ No

Food Item	Location (WIC, Reach-in, Freezer, etc.)	Temperature	Corrective Action Taken (if needed)

COMMENTS:

ATTACHMENT C
EMERGENCY RE-OPENING INSPECTION FORM FOR FOOD SERVICE ESTABLISHMENTS AFTER A STORM

EMERGENCY RE-OPENING INSPECTION FORM FOR FOOD SERVICE ESTABLISHMENTS AFTER A STORM

WATER SUPPLY – *If the facility does NOT have running water at the time of this re-opening inspection, it must remain closed until potable running water has been restored OR they can meet the requirements outlined in Table A for a Boil Water Advisory or Table B for complete loss of water (attached.) The establishment may re-open or continue operations IF they have a PRE-APPROVED Emergency Operations Plan on file with the Health Authority which outlines operations without water.*

1. Is there a Boil Water Advisory in effect? ☐ Yes (Go to 1a.) ☐ No

1a. If "Yes" can the establishment meet the minimum requirements outlined in Table A? ☐ Yes ☐ No (must remain closed)

2. Does the establishment have hot (110°F) and cold running potable water? ☐ Yes ☐ No (Go to 2a.)

2a. If "No" can the establishment meet the minimum requirements outlined in Table B? ☐ Yes ☐ No (must remain closed)

NATURAL GAS: - *If natural gas services are interrupted and the facility relies on natural gas for its water heater or cooking, then the facility must have an alternative method in place to heat water or cook food, provided other services (electric and water) are functioning properly.*

1. Does the facility have a water heater powered by natural gas? ☐ Yes (Go to 1a.) ☐ No

1a. Can the facility heat water by an alternative method? ☐ Yes ☐ No (must remain closed)

2. Does the facility have cooking equipment powered by natural gas? ☐ Yes (Go to 2a.) ☐ No

2a. Does the facility have other electrical cooking equipment? ☐ Yes ☐ No (Go to 2b.)

2b. Can the facility offer menu items that do not require cooking/heating? ☐ Yes ☐ No (must remain closed)

FLOODING – *If flooding has occurred, the food service establishment must remain closed until all surfaces have been cleaned and sanitized and all food and single service items exposed to the flood water have been discarded.*

SEWAGE BACK-UP – *If a sewerage back-up has occurred in the food service establishment, it must remain closed until all exposed surfaces have been cleaned and sanitized and all food and single service items contaminated by the back-up have been discarded.*

FACILITY IS APPROVED FOR RE-OPENING: ☐ Yes ☐ No (provide explanation in comments section below)

COMMENTS:

Person In Charge (Signature):_____ Date:_____

EHS (Signature):_____ Date:_____

ATTACHMENT C
EMERGENCY RE-OPENING INSPECTION FORM FOR FOOD SERVICE ESTABLISHMENTS AFTER A STORM

EMERGENCY RE-OPENING INSPECTION FORM FOR FOOD SERVICE ESTABLISHMENTS AFTER A STORM

*********THIS PAGE IS TO BE DETACHED AND LEFT WITH THE PERSON IN CHARGE*********

Name of Food Service Establishment: _____Permit #: _____

Has been inspected by _____on behalf of the _____County Health Department and found to be:

☐ **SATISFACTORY FOR RE-OPENING**

☐ **UNSATISFACTORY FOR RE-OPENING BECAUSE:**

Person In Charge (Signature):_____ Date: _____

EHS (Signature): _____ Date: _____

EMERGENCY RE-OPENING INSPECTION FORM FOR FOOD SERVICE ESTABLISHMENTS AFTER A STORM

BIOLOGICALLY CONTAMINATED WATER SUPPLY (Table A)

If there is a biologically contaminated water event, boiled water or potable water from another approved source can be used. *(Approved water source includes commercially bottled water, water hauled from an approved public water supply in a covered sanitized container; or approved drinking water from a hauler truck.)*
Water should come to a rolling boil for at least one minute prior to use. (Although bleach or other chemical disinfectants are typically allowed for disinfecting small quantities in residential settings for *drinking water*, it may **not** be allowed as an option for food service facilities, because of the lack of onsite equipment for testing chemical residuals.)

Table A

Activity	Biological Water Contamination
*Cooking	Boiled or potable water only
*Cleaning food contact surfaces	Boiled or potable water only
*Dishwashing	3-compartment sink with boiled or potable water only with wash water maintained at 110°F
*Handwashing	Boiled or potable water only maintained at 100°F
Ice making	Turn off machine until potable water is available; use commercially manufactured ice
Pre-mix soda machines (in bulk, packaged in kegs or bag-in-box and ready to use)	Acceptable to use
Post-mix soda machines (boxes of syrup and CO2, using the facility water source)	Turn off until potable water is available
Coffee/tea machines	If water is boiled as part of the brewing process, acceptable to use

- It is recommended to use disposable dishes and flatware
- Biologically contaminated water *can* be used for flushing toilets and cleaning floors, walls and ceilings

OPERATIONS MUST DISCONTINUE IF ALTERNATIVES LISTED ABOVE CANNOT BE USED

*Using biologically contaminated water to wash hands, dishes and food contact surfaces or for cooking with a sanitizing step/cook step at the end is not always effective against parasites and viruses that may be present in the water.

ATTACHMENT C
EMERGENCY RE-OPENING INSPECTION FORM FOR FOOD SERVICE ESTABLISHMENTS AFTER A STORM

EMERGENCY RE-OPENING INSPECTION FORM FOR FOOD SERVICE ESTABLISHMENTS AFTER A STORM

DO NOT DRINK/DO NOT USE/WATER LOSS (Table B)

If it has been determined that the water is not fit for consumption or use, or there is NO water, then the food service establishment MUST have access to potable water from an approved source. *(Approved water source includes commercially bottled water, water hauled from an approved public water supply in a covered sanitized container; or approved drinking water from a hauler truck.)*

Table B

Activity	Do Not Drink/Do Not Use
Cooking	Potable water only
Cleaning food contact surfaces	Potable water only
Dishwashing	3-compartment sink with potable water only with wash water maintained at 110°F
Handwashing	Potable water only maintained at 100°F
Ice making	Turn off machine until potable water is available; use commercially manufactured ice
Pre-mix soda machines (in bulk, packaged in kegs or bag-in-box and ready to use)	Acceptable to use
Post-mix soda machines (boxes of syrup and CO_2, using the facility water source)	Turn off until potable water is available
Coffee/tea machines	Potable water only
Toilet facilities	Portable toilets with adequate, potable water for handwashing accessible to employees and customers if dining room is open during ALL hours of operation, is acceptable to use

- ❖ It is recommended to use disposable dishes and flatware, and individually wrapped pre-packaged foods with a very limited menu.
- ❖ If the cleanliness of the physical facilities becomes jeopardized by the fact that no water is available for cleaning – operations will need to be discontinued. It is not recommended to use chemically contaminated water for cleaning due to the potential of mixing unknown chemicals.

OPERATIONS MUST DISCONTINUE IF:

- **TOILET AND HANDWASHING FACILITIES ARE NOT AVAILABLE**
- **ALTERNATIVES LISTED ABOVE CANNOT BE USED**

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ANNEXES
ENVIRONMENTAL HEALTH

ENVIRONMENTAL HEALTH EMERGENCY RESPONSE PLAN (EH ERP) ANNEXES

A. EH Strike Team SOG

B. EH Strike Team Credentialing Requirements

C. Guidance Documents

   a. DPH Regulated Guidance for Contaminated Water

   b. Independent Shelter Guidance

D. Public Health Information Library for online forms: PHIL-Environmental_Health_Forms

   a. Emergency Inspection Forms

   b. Additional

E. EH Disaster Education Guide

F. Foodborne Outbreak Investigation Guide

   a. Environmental Assessment Job Aid

G. EH Disaster Communications Guide

H. EH Disaster Field Safety Guide