

Catastrophic Event Playbook



Cascadia Coastal Coalition

www.cascadiacoastalcoalition.org

Field Guide

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Disclaimer

This Field Guide is primarily intended for use by trained volunteers, such as CERT, MRC and like teams. This playbook is designed to be used along with Neighborhood Emergency Supplies and Tools (NEST) kits for use by volunteers in conjunction with training and exercises.

People living nearby who show up at the neighborhood gathering sites are encouraged to help volunteers as long as tasks are within their skill sets. Unsupervised people without appropriate training should not attempt these activities unless no other option is available.

Provided courtesy of:



KCDEM

Kitsap County Department of Emergency Management

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Introduction

This Field Guide offers volunteers and community members help in organizing life-saving and life-sustaining services after a catastrophic event. Why? Earthquakes and other hazards may leave communities stranded. Roads and bridges may not be available after an event. Access to emergency services and communication systems may not be there.

Follow this guide and the structured "plays" to assist you and your community. The guide will help to establish working neighborhood gathering sites. This guide will also help build back working, life-sustaining services for the community.

The plays, objectives, questions, and tasks are for three main time periods:

- Initial response, 72 hours
- Sustained response, 3-7 days
- Long-term response, 1-2 weeks

These response periods are general guidelines. Each neighborhood gathering site will use the field guide based on their problems and what is available at that site.

This field guide helps professional responders and local emergency management officials know where people will gather, where supplies should be sent, and the activities underway at each site. EOCs should work to get resources and communications to each site as quickly as possible. However, in a major event, it will take time for help to arrive.

Defining Concepts

Community Points of Distribution (CPOD)

CPODs are pre-selected locations with supplies for the near-by community. Emergency workers and community members can go to CPODs to seek or provide help following a catastrophic event. They should only consider leaving their homes and family once they have made sure that household members and immediate neighbors are safe.

Be aware that not all CPODs have the same supplies.

The main job of a CPOD is to hold Neighborhood Emergency Supplies and Tools (NEST) kits. These kits should contain step-by-step directions and supplies. With NEST kits, community members can establish neighborhood gathering sites.

A CPOD will also be where supplies for the community will be delivered. This will likely happen after roads and bridges are restored. Early on, supplies may come via small boat to beach landings or even by air drops to nearby open fields.

Municipalities, HOAs, neighborhoods or local emergency management agencies should determine CPOD/Neighborhood Gathering Site(s) based upon assessments of where isolated populations might be trapped. Each site should publish GPS coordinates, as well as a What3Words location on maps. What3Words is an app that makes locations easy to find and share. It is available for most smartphones.

Defining Concepts

Neighborhood Emergency Supplies and Tools (NEST)

The CPODs should have five (5) sealed containers with NEST kits. Each kit will have emergency task cards, tools, and equipment. Use these to respond to emergencies and to create a neighborhood gathering site.

First, look for the kit labeled "Command & Communication Station." This kit will have two emergency task cards and this Field Guide. The first emergency task card is labeled, "Read This Card First." It is located on the outside of the NEST kit. The site lead will use the card instructions to establish a volunteer command. The card will also guide the site lead in how to resource the other sealed NEST kits.

NEST kits include instructions for:

- Command & Communication Station
- Shelter Station
- First Aid Station
- Water, Sanitation and Hygiene (WaSH) Station
- Neighborhood Check Station

Plays

Plays are guidelines for the first 72 hours, 3-7 days, and 1-2 weeks after a catastrophic event. The times are general ideas of when things should happen. These are not strict rules. Each play lists the objectives and planning questions first. Find the stabilization tasks for each Community Lifeline Component (CLC) next. Use each section to break down tasks into smaller jobs for each time frame.

Defining Concepts

Micro-Islands

Micro-Islands are areas that might become isolated following a catastrophic event. Each micro-island may have to work by itself during the first stages of a response or for longer.

Each micro-island will have different resources and capabilities for its community. Each micro-island should develop and publish a capabilities and gap analysis.

Local emergency managers could use the developed micro-island information as a guide during an event. Information to coordinate a response is also included for consideration.

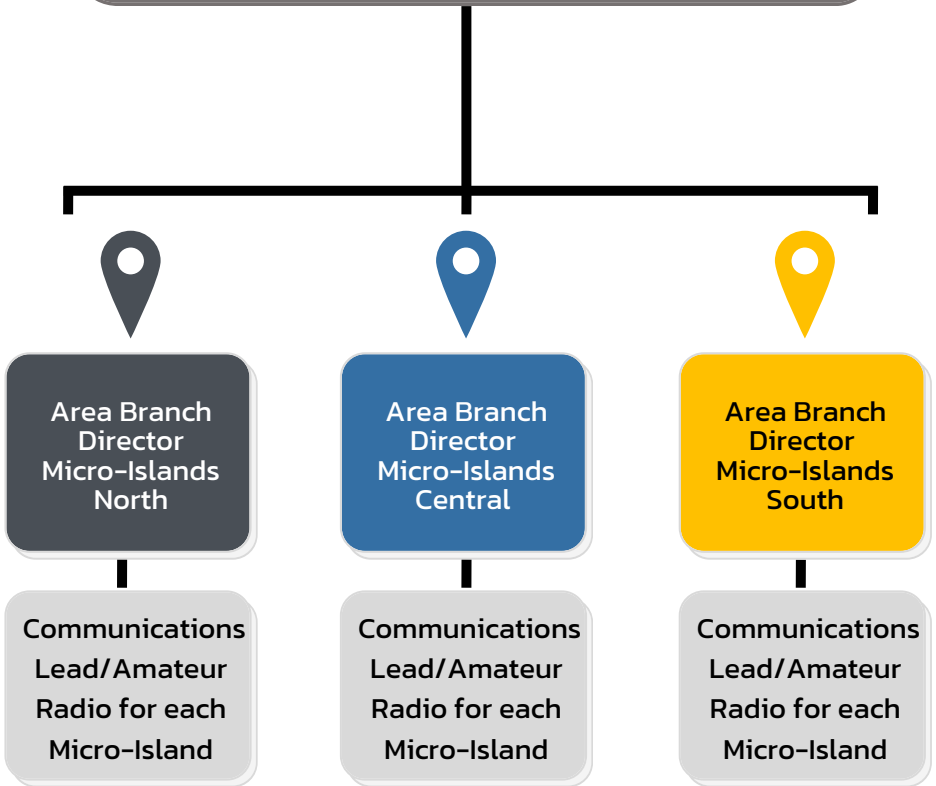
Community Lifeline Components (CLC)

Community Lifeline Components are the basic things a community needs to function. CLCs are organized around human health, safety, and economic security. These are the stabilization tasks for every play:

- Safety and security
- Food, water, and shelter
- Health and medical
- Energy (power and fuel)
- Communications
- Transportation
- Hazardous waste

Local Emergency Organization

Local Emergency Operations Center (EOC)



Neighborhood Gathering Site Organization

Site Leader

Communications
Lead / Amateur
Radio



Shelter
Station
Lead

Support



First-Aid
Station
Lead

Support



Water and
Sanitation
Lead

Support



Neighborhood
Check
Lead

Support

Catastrophic Event/Incident

Initial Critical Tasks

Safety – After Initial Event/Incident

- Survey nearby scene for potential hazards.
 - Downed/broken power lines, gas lines, water lines.
 - Falling debris such as trees, rocks, buildings.
- Check on family & neighbors.
- Turn off water into the house. Turn on only after water in hot water tank gone. Likely to be contaminated once turned back on.
- Turn off utilities if necessary:
 - Electricity: breaker/electrical box.
 - Gas: main valve to the house if you smell or hear leaking gas. A technician will be required to turn back on.
- Turn on the radio and tune to a news station.
- Dress for the current weather.
 - Pack for changing conditions.
 - Grab emergency travel/go kits.
- Choose a safe location for aftershocks post-earthquake.
- Collect & conserve water. Drink recommended amounts.
 - Boil, filter, treat, or distill unknown water sources.
- Use caution with indoor heating and cooking.
 - Carbon monoxide hazards can occur without proper ventilation.
- Operate during daylight hours.
- See Appendix 1 for more information.

Fire Safety

- Extinguish small fires only.
- Always work in pairs.
- If in doubt...DON'T.
- Always have two ways out.
- Be very cautious in smoky conditions.
- Ensure the fire and embers are out.

Play 1: Initial Response

First 72 Hours

Objectives & Planning Questions

- Locate and use NEST kits at the CPODs listed in Appendix 2. Establish neighborhood gathering sites.
 - Verify the inventory checklists in the kits.
 - Follow emergency task cards.
- Establish basic emergency functions. These include food, water, shelter, neighborhood checks, and first aid.
 - Is there emergency transportation to medical facilities?
 - What is the current weather? Remember that 3 hours of exposure in bad weather can be lethal.
 - What non-traditional methods exist to get and distribute potable water?
 - How much water do you need each day? Follow the CDC formula to calculate water needs: 1 gallon / per person / per day.
 - What supplies do you need for high-risk age groups of over 70 and under 5? Consider prescription medication, diapers, formula, etc.
 - What support is needed for those with access and functional needs including mobility, vision, and hearing concerns? What support is needed for those who are medically fragile?
 - What animals need care and food?
- Identify local first responders and emergency management personnel, if available.
- Attempt to establish communication.
 - Are there any communications systems up and running?
 - Determine if line-of-sight radio communications can be established. If not, can messengers or "runners" meet emergency communication needs?
- Create inventory of all known resources.
- Assess damages.

Play 1: Initial Response

First 72 Hours



Safety and Security Stabilization Tasks

- Identify leadership from local emergency response organizations, if available.
 - Police
 - Fire
 - Medical
 - Search & Rescue
 - Tribal Leadership
 - City/county
- Conduct ongoing neighborhood check efforts with volunteer teams.
- Begin defensive firefighting operations, if needed or possible.
- Develop security and fair distribution of current emergency supplies.



1 Gallon
1 Day
1 Person

Food, Water, Shelter Stabilization Tasks

- Determine shelter-in-place or emergency shelter options.
- Provide emergency shelters from NEST kits.
- Locate and distribute sources of food and water from NEST kits. If needed, ration.
- Develop and carry out a plan for obtaining more water and food sources.
- Establish a rainwater collection system.
- Ensure sources of baby food/formula if needed.
- Determine daily water requirements. The CDC formula is 1 Gallon / 1 Day / 1 Person.
- Treat water for drinking. See Appendix 1 for details on how to make water safe for drinking.

Play 1: Initial Response

First 72 Hours



Health and Medical Stabilization Tasks

- Locate and determine initial medical resources.
- Open and use the medical NEST kit.
- Establish first aid stations using the NEST kit and task cards (evacuate, urgent, and priority.)
- Determine and plan types of care required. This will include gathering a pharmaceutical and non-pharmaceutical needs lists.



Energy Stabilization Tasks

- Make an initial assessment of energy capabilities.
- Locate emergency generators, if available.
- Locate a source of power/fuel, if available.
- Develop battery inventory and management plan. This includes emergency needs and solar charging.



Hazardous Materials Stabilization Tasks

- Make a note of any life-threatening pollutants and contaminants.
- Isolate/mark hazardous sites to prevent accidental entry.
- Hand out personal protective equipment (PPE) if needed.
- Make plans for human waste disposal at your site.

Play 1: Initial Response

First 72 Hours



Communications Stabilization Tasks

- Check all forms of communication.
- Check for alternative communication methods such as "runners."
- Check if there is an amateur radio operator at the CPOD site.
- Report initial assessments, if possible, to the local emergency management or an area branch director (if established) via amateur radio. Local radio frequencies for each Neighborhood Gathering Site should be developed.



Transportation Stabilization Tasks

- Do a first check of transportation options.
- Check for other ways to transport items such as:
 - Boats
 - All-terrain vehicles (ATV)
 - Hiking
 - Wheelbarrows to haul supplies
 - Pack animals
 - Bicycles
 - Motorcycles
- Make plans for emergency routes to your site from the closest supply delivery point.
- Use maps from the "neighborhood check" kit. Mark accessible roads.

Play 2: Sustained Response

3–7 Days

Objectives & Planning Questions

- Can you provide basic emergency functions at your site such as shelter, water, warmth? If no, evacuate to another micro-island or location. Restart checklist at new location.
- Continue basic emergency functions. These include food, water, shelter, neighborhood checks, fire, and first aid.
- Can you transport “urgent care” and “priority care” patients out of the region?
- Establish mass care operation.
 - What supplies do you need for the high-risk age groups of over 70 and under 5? Consider prescription medication, diapers, formula, etc.
 - What animals need care and food at neighborhood gathering sites?
- Establish sustainable temporary shelters and working CPODs (local food and water sourcing.)
 - Can you secure local supplies? How do you make sure everyone gets a fair share?
 - Is there a long-term sustainable water source? Are local natural water sources contaminated?
 - How do you plan to make sure water is clean and safe to drink? See Appendix 1 for details on how to make water safe for drinking.

Play 2: Sustained Response

3-7 Days

Objectives & Planning Questions Continued

- Begin requesting supplies and emergency services, if available through amateur radio, to your local emergency manager or area branch director (if established).
 - What supplies can you find here? What supplies do you need?
 - Begin clearing roads for emergency transportation and supply routes.
 - Site leaders or communication lead should fill out a resource request, including priority, lifesaving needs. List where resources should be delivered and point of contact information.
- What alternate transportation means are there to get supplies to the CPODs?
 - Where is the nearest airstrip, landing zone, airdrop site?
 - Is there boat access? Is it in condition to receive supplies and distribute these to the micro-island?

Play 2: Sustained Response

3-7 Days



Safety and Security Stabilization Tasks

- Make sure evacuation efforts are safe and secure.
- Continue defensive-only firefighting if needed as well as neighborhood checks. Use:
 - Neighborhood check station/volunteers
 - Available police
 - Available firefighters
 - Other governmental employees
- Identify people to lead the CPOD site.
- Identify people to provide security for the CPOD.
- Consider a volunteer neighbor watch.
- Create a neighborhood gathering site.
- Determine a fair means to distribute supplies.
- Link local leadership from neighborhood gathering sites and CPODs to local EOC through your area branch directors (if established).



Health and Medical Stabilization Tasks

- Think about which patients need evacuation. Evacuate urgent and priority patients, if possible.
- Think about emergency medical services in the area.
- Think about what medical supplies you need.

Play 2: Sustained Response

3–7 Days



1 Gallon
1 Day
1 Person

Food, Water, Shelter Stabilization Tasks

- Create and use plans for potable water sources.
 - City utilities, if operational
 - Traditional wells
 - Lakes, streams, ponds (boil, chlorine tablets, filters)
 - Desalination units, if available
 - Bottled water
- Setup CPODs to handle incoming supplies.
- Begin requesting supplies. Think about the best place in the CPOD. This could be a beach, airport, or open space for airdrops. Use GPS coordinates, What3words, or other ways to identify location.
- Create sustainable shelters. Consider:
 - Schools, churches, other non-government organizations.
 - CPODs and neighborhood gathering sites, if suitable for size of population.
 - Adequate spacing, heating/cooling, and WaSH stations



Energy Stabilization Tasks

- Deploy more fuel and emergency generators if available.
- Begin moving emergency operations during the daytime to conserve lights and available power sources.
- How are you getting fuel? Think about using boats for this purpose.
- **Never hook a generator up to a building electrical system. Can be dangerous.**

Play 2: Sustained Response

3–7 Days



Communications Stabilization Tasks

- Continue to improve communications.
- Establish contact with emergency management.
- Use CPODs and shelters as points to share information with the public.
- Start communicating with other micro-islands.
- Keep communications to required information only. These include:
 - Critical assessments
 - Supply requests
 - Emergency situations



Hazardous Materials Stabilization Tasks

- Begin volunteer efforts to clean debris away from storm drains and sewer systems.
- Identify possible airborne toxins and smoke, and direction of travel, if needed. Keep people upwind of any airborne hazard.
- Provide personal protective equipment to volunteers and at CPODs.
- Activate plans for human waste disposal at emergency shelters and CPODs.

Play 2: Sustained Response

3-7 Days



Transportation Stabilization Tasks

- Check your transportation capabilities.
- Plans for alternative means of transportation such as:
 - Boats
 - All-terrain vehicles (ATVs)
 - Hiking
 - Wheelbarrows
 - Bicycles
 - Motorcycles
 - Animals
- Make plans for emergency routes and supply delivery to CPODs/neighborhood gathering sites.
- Use maps from the "Neighborhood Check" kit to highlight open roads.

Play 3: Long-Term Response

1-2 Weeks

Objectives & Planning Questions

- Assign leaders. Leaders will assess and develop incident action plans (IAP). They will also request supplies for all sites.
- If county utility and/or road department operations are initiated, support as requested and provide updates on progress to your local emergency manager or area branch director.
- Assess damages and capabilities across all CLCs.
 - What are priorities? Consider power and transportation routes.
 - What do you need to maintain the operation of CLCs?
 - What supplies and repairs do you need now?
- Identify needs and rank critical infrastructure repair, if possible.
- Expand transportation clearing efforts.
 - Who is available for road clearing efforts?
 - Are there defined transportation routes across each micro-island?
- Check that you request enough supplies for your population.
- Communicate with neighboring micro-islands and your area branch director or local emergency manager.
- **Avoid using heavy machinery to dig trenches or make roads as you could damage the underlying utility lines and delay a return of service.**

Play 3: Long-Term Response

1-2 Weeks



Safety and Security Stabilization Tasks

- Continue neighborhood checks and firefighting efforts, if needed.
- Continue safety and security efforts at CPODs, shelters, and major resource locations.
- Build a volunteer network for long-term response efforts.
- Establish a full working organizational chart throughout the micro-island and to the local EOC.



1 Gallon
1 Day
1 Person

Food, Water, Shelter Stabilization Tasks

- Create a roster of people and specific needs for diets.
- Check that a variety of food is available. Accommodate special diets and religions.
- Create a schedule for planned deliveries to support neighborhood gathering sites.
- Continue to get and share food at CPODs and neighborhood gathering sites.

Play 3: Long-Term Response

1-2 Weeks



Energy Stabilization Tasks

- Deploy more fuel and emergency generators, if available/needed.
- Identify needed repairs. Rank, if possible.
- Use barge refueling plans for volunteer boats.
- Refill and transport refilled gas containers to locations that have emergency generators.
- Check battery usage and solar/hand crank power cells for priority equipment.



Communications Stabilization Tasks

- Continue to improve communications.
- Complete communication network through all micro-islands and surrounding counties.
- Expand public communication capabilities such as cell service towers, if available.
- Keep communications to required information only.
 - Critical assessments
 - Supply requests
 - Emergency situations

Play 3: Long-Term Response

1-2 Weeks



Transportation Stabilization Tasks

- Continue route clearing. Consider:
 - Ranking for greatest need.
 - Major roadways with access to waterways, airstrips, medical.
 - CPODs and neighborhood gathering sites.
- Open roads to residents trying to leave/enter the area, if safe.



Hazardous Materials Stabilization Tasks

- Support county worker efforts to continue repairs on stormwater and sewer systems to prevent water contamination.
- Continue to provide personal protective equipment to volunteers and at CPODs.
- Create plans for cleaning debris at key areas. Look for volunteers with hazardous waste knowledge.



Health and Medical Stabilization Tasks

- Remove morgue areas from first aid stations.
- Begin plans for mental health services.
 - Mental health counseling
 - Family services
 - Religious services
 - Activities and learning for children

Abbreviations & Acronym Guide

- **ATV:** All Terrain Vehicles
- **CPOD:** Community Points of Distribution
- **CERT:** Community Emergency Response Team
- **CLC:** Community Lifeline Components
- **EOC:** Emergency Operations Center
- **EM:** Emergency Management
- **GPS:** Global Positioning System
- **HAM:** Amateur Radio Operators
- **IAP:** Incident Action Plans
- **ICP:** Incident Command Post
- **ICS:** Incident Command System
- **MRC:** Medical Reserve Corps
- **MRE:** Meals, Ready to Eat
- **NEST:** Neighborhood Emergency Supplies and Tools
- **NGO:** Non-Governmental Organizations
- **NOAA:** National Oceanic and Atmospheric Administration
- **PPE:** Personal Protective Equipment
- **SAR:** Search and Rescue
- **SIP:** Shelter in Place
- **STB:** Stop the bleeding
- **UPS:** Uninterruptible Power Supply
- **WaSH:** Water, Sanitation and Hygiene Station

Appendix 1

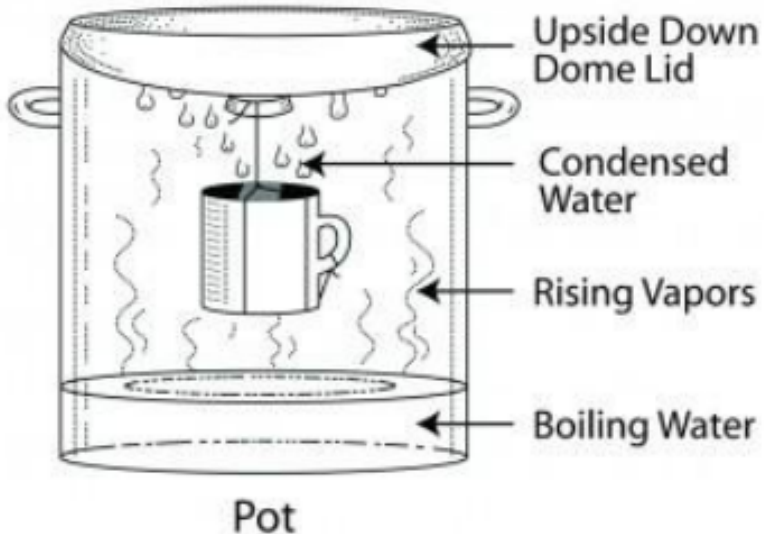
Helpful Guides and Practices

Emergency water guide

- Water requirements & sources
- Cleanliness & treatment

Emergency food guide

- Prioritization & rationing
- Emergency cooking & temperatures



Distillation Method of Water Treatment

Emergency Water Guide

Water Requirements & Sources

How Much?

Water is necessary! Never ration water. The average person can only live three days without water. Water will also need to be used for cooking food and hygiene.

An active person will need to drink at least a half-gallon of water each day. People in hot environments or weather will need more. Children, pregnant or nursing women will also need more.

CDC Formula: 1 Person / 1 Gallon Water / 1 Day

Emergency Sources of Water

- Hidden Home Sources*
 - Hot-water tank
 - Ensure gas/electricity is off
 - Drain hot-water tank from bottom drain
 - Pipes
 - Let air into the plumbing by turning on the highest faucet in the house and getting water from the lowest faucet.
 - Ice cubes
- Outdoor Sources
 - Catch rainwater in various container & tarps
 - Streams, rivers, & moving bodies of water
 - Ponds and Lakes
 - Natural Springs

*Note: Shut off incoming water supply to prevent contamination. You can do this by locating the main water valve in the house.

Emergency Water Guide

Water Requirements & Sources

Cleanliness

- Avoid water with floating material, odors, or strange colors.
- Do not drink flood water.
- Use saltwater only if it is distilled or desalinated.
- Treat all water from water sources of uncertain quality.

Treatment

- Boiling
 - In a large pot or kettle, bring water to a rolling boil for 1 minute.
 - Boiled water will taste better if you put oxygen back into it. Do this by pouring the water back-and-forth between two clean containers. Wait until the water has cooled.
- Filters
 - Varying filters have ratings and filtration limits. Read filter packaging for uses.
- Chlorination/Treatment
 - Use water treatment tablets as prescribed on the packaging.
 - Or add 16 drops (1/8 teaspoon) of unscented bleach per gallon of water, stir, and let stand for 30 minutes.
- Distillation
 - Boil water in a pot with an inverted lid. Catch the condensed vapor into a cup hanging right-side-up to the inverted lid.
 - Removes microorganisms, heavy metals, salts, and other chemicals.
 - Utilize proper safety precautions when performing this method.

Emergency Food Guide

Prioritization & rationing

First

Use perishables (foods that will go bad fast) that are in the refrigerator, pantry, garden, etc. If you have a lot of perishables, consider cooking these, if possible. Even a large pot of soup or stew will provide critical nutrition. Put these in the freezer, using freezer safe containers or bags if you have access to ice.

Then

Use the frozen foods from the freezer. Limit the number of times you open the freezer door. In a well-insulated freezer, foods should be safe to eat for at least two days.

Finally

Begin to use the non-perishable foods, those that will last without refrigeration.

Rationing and Nutrition Tips

- Healthy people can survive on half their normal food intake for extended periods with reduced activity.
- Do not ration foods for small children and pregnant or nursing women.
- If the water supply is low, avoid salty foods. Instead choose foods with high liquid content.
- Eat at least one well-balanced meal a day and take in enough calories to complete any necessary work.
- Drink enough water to enable proper bodily functions: at least a half-gallon per day.
- Include vitamins, minerals, and supplements if you have them.

Emergency Food Guide

Emergency cooking & temperatures

Emergency Cooking

- Use charcoal/gas grill or camp stoves outdoors only.
- Fireplaces can be used indoors if outdoor options are not available.
- Only cook food that needs to be cooked to preserve fuels. Canned food can be eaten out of the can.
- Use a cooking thermometer if available to ensure proper temperatures.

Cooking Times and Temperatures (time at least 15 seconds)

165°F/74°C: Poultry, stuffing that includes meat, stuffed meats and pastas, dishes containing previously cooked food.

155°F/68°C: Ground meat, seafood, injected, marinated, or tenderized meats, eggs to be hot held.

145°F/63°C: Whole seafood, beef, pork, veal, lamb (steaks and chops), roasts, eggs to be served immediately.

135°F/57°C: Ready-to-eat hot-held food, fruits, vegetables, grains, and legumes to be hot-held.

Even after cooking, food shouldn't remain in the temperature danger zone for more than four hours. The temperature danger zone falls between 41°F/5°C and 135°F/57°C and is where bacterial growth thrives.