

DOVER AIR FORCE BASE

Emergency Preparedness Guide

10-3

2 August 2010



BY ORDER OF THE COMMANDER
HQ 436th AIRLIFT WING (AMC)
DOVER AFB DE 19902-5201

DAFBP 10-3
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Chapter 1: INTRODUCTION



Dover AFB is centrally located on the DelMarVa peninsula. The peninsula is surrounded by the Chesapeake Bay to the west, the Delaware Bay to the east and the Atlantic ocean to the south. This pamphlet is designed to be applicable to Dover military and civilian employees, and families residing either on or off base. It contains information that will assist you and your family's survival in the event of a disaster affecting Dover AFB and the surrounding community.

Family planning for disasters should take into consideration the military member may be called to duty and not be able to assist the family in executing its disaster plan. **At a minimum ensure you have an emergency plan for any of the situations presented in this guide.**

NOTIFICATION:

Advanced warning and special instructions will be disseminated throughout the base and surrounding areas by the Installation Notification and Warning System (Giant voice, Telephone Alert System, Desktop Alert), organizational mailboxes, and Delaware Emergency Notification Systems as well as the following local radio and televisions stations;

Television Emergency Broadcasting System:

DAFB Base Commanders channel - 24
 WMDT-TV 47
 WBOC- TV 16

Radio stations:

NewCastle County:

WDEL - 1150 AM	WSTW - 93.7 FM
WJBR - 1290 KHZ	WJBR - 99.5 FM
EAGLE - 97.7 FM	WGMD - 92.7 FM
WILM - 1410	

Kent County:

WDOV - 1410 AM 92.9 FM

Sussex County:

93.5 FM 900 AM

Statewide traffic alerts - 1380 AM



Chapter 2: WINTER STORMS



Winter storms are divided into three categories: Blizzards, Heavy Snowstorms, and Ice Storms.

Blizzards - Considered the most dangerous of all winter storms, combining temperatures below 10°F, heavy snow falls, and winds over 35 miles per hour, and blowing snow expected to prevail for a period of three hours or longer.

Heavy Snowstorms - Can drop at least four inches of snow in a 12-hour period or at least six inches in a 24-hour period. High winds may accompany the storm, creating snow drifts and causing poor visibility.

Ice storms - Occur when moisture falls from the clouds and freezes immediately upon impact. This makes driving or even walking extremely hazardous due to slick surfaces.

Protective Measures:

Indoors: If you have no heat or if the pipes have frozen, remove any insulation or layers of newspapers and wrap pipes in rags. Completely open all faucets and pour hot (if available) water over the pipes starting where they were the most exposed to the cold. Listen to local radio or television for latest updates. Close off unneeded rooms, stuff towels under doors, and wear loose, layered clothing.

Outdoors: If you must be outside, wear several layers of loose fitting clothing. Mittens are warmer than gloves. Hoods should be worn to protect your head and face. If you go out to shovel snow, take frequent breaks and do not over exert. Cover your mouth to protect your lungs from extremely cold air.

Traveling: Winter travel by automobile is serious business, especially if severe storms are encountered. When traveling during winter months keep these points in mind: Keep current on the latest weather information. Winterize your car. Keep gas tank filled and have emergency supplies on hand (See Attach 6, 7). Plan your travel with alternate routes. Try not to travel alone. Travel with two or more people when possible. Share your travel itinerary with other family members or friends so they are aware of the route you are taking and your timeline. A bag of kitty litter is an extremely useful item in a winter storm as it can provide traction under wheels of vehicles stuck in ice or snow.

What to do when trapped by a blizzard in a vehicle:

Stay in your vehicle. Do not go out on foot unless you are absolutely certain you can find help nearby. Turn on your hazard lights and tie a bright cloth to your antenna to hang from the window. This will assist search crews in finding you. Run the engine about 10 minutes per hour to stay warm, keeping exhaust pipe clear from rising snow drifts, and keep a window slightly open for ventilation. Continue moving arms and legs helps keep you warm. At night, turn on the inside dome light so work crews can spot you.

Refer to Attachments 6 - 8



Chapter 3: FLOODS



A flood occurs when a body of water exceeds its “normal” capacity such as when a river overflows its banks. Thunderstorms, hurricanes, heavy rainfall, fast melting snow, debris blockage, or any combination of these can cause local bodies of water to exceed their normal levels.

Coastal Flooding: This generally occurs when there are significant storms, such as tropical and extratropical cyclones off-shore that drive tides to higher than normal levels. Dover AFB is adjacent to the St Johns River which is affected by the tide in the Delaware Bay.

Actions to take before a flood:

- Avoid buying or building on a floodplain unless you elevate and reinforce your home. Elevate the furnace, water heater, and electric panel if susceptible for flooding.
- Install check valves in sewer traps to prevent flood water from backing up into your drain at home.
- Construct barriers (levees, beams, floodwalls) to stop floodwater from entering the building.
- Seal walls in basements with waterproofing compounds avoid seepage.

Flood Watch or Flashflood Watch: Flooding may happen soon. If you live in a low lying area subject to flooding, ensure you have materials like sandbags, plywood, plastic sheeting, and timber handy for emergency waterproofing. If you live in a manufactured home or low-lying area, plan a flood-free evacuation route and consider evacuation.

Flood Warning: Means flooding is already occurring or will occur soon in your area. Turn off water, gas and electricity if time permits. When directed; evacuate.

Actions to take during a flood: If there is any possibility of a flash flood, move immediately to higher ground. Do not wait for instructions to move.

DO NOT move to a higher floor of a home or into an attic space – this leaves no route of escape.

If you are directed to evacuate: Secure your home. If you have time, bring in outdoor furniture. Move essential items to an upper floor. Turn off all utilities. Disconnect electrical appliances. Do not touch electrical equipment if you are standing in water or are wet. Do not walk through moving water. Six inches of moving water can make you fall. If you must, walk where it is not moving, and use a stick to check the firmness of the ground in front of you. Do

not drive into flooded areas. If floodwaters rise around your car, abandon the car and move to higher ground if you can do so safely.

Actions to take after a flood: Listen for news reports to learn whether the community's water supply is safe to drink. Avoid floodwaters; it may be contaminated by oil, gasoline, or raw sewage. Water may also be electrically charged from downed or underground power lines. Be aware of where water has receded. Roads may have been weakened and could collapse. Return home only when authorities have deemed it safe to do so. Use extreme caution when entering a building, there may be hidden damage, especially in the foundation. Damaged sewage systems are serious health hazards. Service damaged septic tanks as soon as possible. Clean and disinfect everything that got wet. One (1) cup of household bleach to five (5) gallons of water. Never mix bleach with other cleaners. Mud left from floodwater can contain sewage and chemicals.

Refer to Attachments 1 – 10



Chapter 4: THUNDERSTORMS/LIGHTNING

A thunderstorm is a disturbance of the atmosphere marked by wind, rain, (sometimes snow, hail, or sleet), and accompanied by lightning and thunder. If you can hear thunder you are close enough to the storm to be struck by lightning. A bolt of lightning reaches a temperature approaching 50,000 degrees F in a split second. Seventy five to 100 Americans are struck and killed each year. Stay in-doors for at least 30 minutes after hearing the last clap of thunder. Thunderstorms may occur singly, or in clusters or in lines. All thunderstorms contain lightning. The rapid heating and cooling of air near the lightning causes thunder. Their unpleasant side effects can be lethal. You should consider any thunderstorm a danger. Automobiles offer excellent lightning protection. Rubber soled shoes and rubber tires offer no protection from lightning. However, the steel frame of a hard topped vehicle provides increased protection if you are not touching metal.

Severe thunderstorms also have the possibility of producing **Tornadoes** which are covered in the next chapter, or **Micro-bursts**. A microburst is a small, very intense downdraft that descends to the ground resulting in a strong wind divergence. Microbursts are capable of producing winds of more than 100 mph causing significant damage. The life span of a microburst is around 5-15 minutes.

If in a vehicle: Pull safely onto the shoulder of the road away from any trees that could possibly fall on your vehicle. Turn on your emergency flashers and stay in your vehicle until the storm has passed.

Actions to take during a thunderstorm: Do not handle any electrical equipment or corded telephones as lightning could follow the wire. Television sets are particularly dangerous at this time. Avoid bathtubs, water faucets, and sinks because metal pipes can transmit electricity. Turn off the air conditioner. Draw blinds and shades over windows.

If caught outside during storm: When there is no shelter, avoid the highest object in the area. If only isolated trees are nearby, your best protection is to crouch in the open, keeping twice as far away from isolated trees as the trees are high. Avoid hilltops, wire fences, and any electrically conductive objects.

Struck by lightning: If you feel your hair stand on end (which may indicate you are about to get struck by lightning) bend forward, putting your hands on your knees. A position with feet together and crouching while removing any metal objects, is recommended. Do not lie flat on the ground. People struck by lightning carry no electrical charge and can be handled safely. You or someone else should call 911 or your local EMS number and stay with them. If the strike caused the victim's heart to stop, provide CPR until EMS arrives.

Refer to Attachments 6 - 8



Chapter 5: TORNADOES



Tornadoes can occur anywhere at any time of year, but most frequently in April, May, and June. The peak month is usually May. A tornado appears as a rotating funnel shaped cloud, which extends toward the ground from the base of a thundercloud. It varies from gray to black in color, spins like a top, and sounds like a locomotive. These small short-lived storms are most violent and the most destructive over a small area. They make strike quickly with little or no warning. Over 80% of all Tornadoes strike between noon and midnight. They can last from as little as one minute or over an hour. Tornadoes generally occur near the trailing edge of a thunderstorm. Mobile homes are particularly vulnerable to a tornado. When a tornado watch is issued for personnel living in this type structure, evacuate to a building with a strong foundation.

Warnings and danger signs: An approaching cloud of debris can mark the location of a tornado even if a funnel is not available. Before a tornado hits the wind may die down and the air may become very still. You may hear the sound of a loud roar, similar to a freight train or see large hail.

Ensure all emergency supplies are on hand: Plan to evacuate your mobile home to safe location/structure when directed by local authorities.

Tornado Watch: Weather conditions are favorable for a tornado to occur in or near your location.

Tornado Warning: A tornado has been sighted, is on the ground in the local area, or has been identified on weather radar.

If you are directly in the path of a Tornado, it will appear to be standing still, but growing larger. **Take cover immediately.** Your best protection is an underground shelter, basement, or steel framed or reinforced concrete building. Take cover under a sturdy workbench or table. If there is no basement, take cover in the center part of the house/building on the lowest floor, away from outside walls and windows. If outside, in open country, drive at a right angle away from the tornado's path. If there isn't time to do this, or if walking, take cover and lie flat in the nearest depression, such as a ditch, culvert, excavation, or ravine.

The Fujita-Pearson Tornado Rating scale

F0	40-72 mph	Gale tornado -- Light damage. Some damage to chimneys; break branches off trees; push over shallow-rooted trees; damage sign boards.
F1	73-112 mph	Moderate tornado -- Moderate damage. The lower limit is the beginning of hurricane wind speed; peel surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads.
F2	113-157 mph	Significant tornado -- Considerable damage. Roofs torn off frame houses; mobile homes demolished; pushed over; large trees snapped or uprooted; light-object missiles generated.
F3	158-206 mph	Severe tornado -- Severe damage. Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
F4	207-260 mph	Devastating tornado -- Devastating damage. Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
F5	261-318 mph	Incredible tornado -- Incredible damage. Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile sized missiles fly through the air in excess of 100 meters(109 yards); trees debarked; incredible phenomena will occur.
F6 - F12	319 mph - MACH 1 - the speed of sound	The maximum wind speeds

Post-Tornado Safety Measures:

Watch for: Fallen objects, downed electrical lines, weakened walls, bridges, and flooding. Use extreme caution when entering or working in buildings that may have been damaged or weakened by a tornado. Do not enter a building until you are notified it is safe to do so.

Refer to attachments: 6 - 8



Chapter 6: TROPICAL STORMS and HURRICANES



Tropical Storms – form in the Atlantic Ocean near the equator just off the western coast of Africa. These storms are an area of low barometric pressure called a tropical depression with circulating winds and associated thunderstorms. When these winds become greater than 35 mph the storm is then upgraded to a tropical storm and is named.

What is a hurricane? A hurricane is a tropical storm whose winds reach sustained wind speeds of >73 mph. Hurricanes produce violent winds, torrential rains, incredible waves, and floods. A hurricane may be over 400 miles in diameter. Hurricanes may last a few days or several weeks.

Storm season runs from June through November with peak months August and September. Hurricanes consist of winds exceeding 74 miles per hour, accompanied by intense rain, dangerously high tides and possible flooding. Side effects of a hurricane include severe thunderstorms, tornadoes, and flooding. These can occur before, during, and after a hurricane passes over a given location.

Storm Surge: The rotating winds and forward movement of the storm create a wave in front of the hurricane that can reach incredible heights. As the storm makes landfall, this wave is pushed inland and causes a majority of the damage and flooding to coastal areas. If the hurricane makes landfall at high tide, this effect is increased. The angle at which the storm hits the coast and the geography of the shoreline, affect the storm surge height.

Eye of the Hurricane: Winds and rain rotate around a central area of the storm called the “Eye.” This area is relatively calm and is roughly 20 - 50 miles wide. If the storm center passes over your area, the wind will calm down for a period lasting for a few minutes to half an hour or more. Do not be fooled into thinking the hurricane has passed. Many people lose their lives by making this mistake. When the winds begin again, they rapidly increase to hurricane force, **and** they come from the **opposite** direction.



Hurricane Conditions: The Dover Air Force Base issues Hurricane conditions HURCONs for Dover AFB based on information provided by the National Hurricane Center. These conditions indicate when sustained winds of 50 Knots or 60 mph or greater are estimated to reach DAFB. These conditions should not be confused with the Saffir-Simpson Hurricane scale.

DAFB Hurricane Conditions

HURCON 4 – Storm is approximately 72 hours from Dover AFB

HURCON 3 – Storm is approximately 48 hours from Dover AFB

HURCON 2 – Storm is approximately 24 hours from Dover AFB

HURCON 1 – Storm is approximately 12 hours from Dover AFB

The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 categorization based on the hurricane's intensity at the indicated time. The scale provides examples of the type of damage and impacts in the United States associated with winds of the indicated intensity. In general, damage rises by about a factor of four for every category increase¹. The maximum sustained surface wind speed (peak 1-minute wind at the standard meteorological observation height of 10 m [33 ft] over unobstructed exposure) associated with the cyclone, is the determining factor in the scale. (Note that sustained winds can be stronger in hilly or mountainous terrain – such as the over the Appalachians or over much of Puerto Rico – compared with that experienced over flat terrain².)

Categories:

Category One Hurricane (Sustained winds 74-95 mph [119-153 km/hr]).

Very dangerous winds will produce some damage

Category Two Hurricane (Sustained winds 96-110 mph [154-177 km/hr]).

Extremely dangerous winds will cause extensive damage

Category Three Hurricane (Sustained winds 111-130 mph [178-209 km/hr]).

Devastating damage will occur

Category Four Hurricane (Sustained winds 131-155 mph [210-249 km/hr]).

Catastrophic damage will occur

Category Five Hurricane (Sustained winds greater than 155 mph [249 km/hr]).

Catastrophic damage will occur

<http://www.nhc.noaa.gov/sshws.shtml>

Hurricane Safety Rules (during preparation phase):

- Bring in outdoor objects such as lawn furniture and toys. Anchor objects that cannot be brought inside.
- Turn refrigerator and freezer to coldest setting and only open when absolutely necessary and close quickly.
- Review evacuation plan and assemble your disaster supply kit.
- If you own a boat - secure it or move it to a safe place. Use rope or tie downs to secure boat to trailer. Use tie downs to anchor trailer to the ground or house.
- Store drinking water in clean, closed containers (i.e., jugs, bottles, and cooking utensils; you may also use your disinfected bathtub, sinks, etc.). Your town's water supply may be contaminated by flooding or damaged by the hurricane.
- Board up windows or protect them with storm shutters and turn off the main gas valve at the meter and leave the house immediately (if directed to evacuate).
- Make a record of your personal property. Take photos or video tape of the exterior and interior of your home, including your personal belongings. Store these documents in a safe place and bring them with you if you are directed to evacuate.

Hurricane Safety Rules (during a Hurricane):

- Listen to radio (battery operated or hand held crank type) or television for progress. (Refer to emergency radio stations listed in introduction, page 1)
- Take refuge in a small interior room, closet or hallway in your residence. If in a mult-story building, go to the first or second floor and stay in an interior room away from windows.
- Stay inside away from windows, skylights, and glass doors.
- Keep curtains and blinds closed.
- Do not go outside when the eye passes over. The storm is not over. Winds and rain will soon resume.

Hurricane Safety Rules (after a Hurricane):

- Stay in safe location until directed by local authorities it is safe to leave.
- Stay tuned to local radio stations for information on medical care, how to apply for assistance.
- Do not drink or prepare food from tap water until notified it is safe to do so.
- Talk to your children about what happened and what they can do to help.
- Stay away from disaster areas unless authorities request volunteers.
- Stay away from downed power lines and report them to the power company.
- If able, open your windows and doors to ventilate and dry your home.
- Drive only if absolutely necessary and avoid flooded roads and washed out bridges.
- Do not re-enter the house until it is safe to do so.

Refer to Attachments 1 - 12



Chapter 7: TERRORISM

PREPARING FOR THE UNEXPECTED

Terrorism - is defined as the use of force or violence against persons or property in violation of the criminal laws of the US for purposes of intimidation coercion or ransom. Acts of terrorism include assassinations, kidnappings, hijackings, bomb scares, bombings, computer based cyber attacks, the use of chemical, biological, radiological, and nuclear weapons.

High risk targets include military and civilian government facilities, airports, large cities, large public gatherings, water and food supplies, utilities, and corporate centers.

There are five levels of threat:

- (a) Severe - Red
- (b) High - Orange
- (c) Elevated - Yellow
- (d) Guarded - Blue
- (e) Low - Green

What You Can Do to Prepare: Finding out what can happen is the first step. Once you have determined the events possible and their potential in your community, it is important that you discuss them with your family or household. Develop a disaster plan.

Create an Emergency Contact Plan: Choose an out-of-town contact your family will call to check on each other. Your contact should live far enough away that they are not affected by the same event and be informed that they are the contact. Make sure each household member has that contact's telephone numbers (home, work, pager and cell). Leave these contact numbers at your children's schools and at your workplace.

Establish a Meeting Place: Having a predetermined meeting place away from your home will save time and minimize confusion should your home be affected or the area evacuated. You may even want to make arrangements to stay with a family member or friend in case of an emergency. Be sure to include any pets in emergency planning considerations.

Assemble a Disaster Supplies Kit: If you need to evacuate your home or are asked to "shelter in place," having some essential supplies on hand will make you and your family more comfortable. **Prepare a disaster supplies kit (See Atch 7).**

Check the School Emergency Plan: You need to know if they will they keep children at school until a parent or designated adult can pick them up or send them home on their own. Be sure that the school has updated information about how to reach parents and responsible caregivers to arrange for pick up. Ask what type of authorization the school may require to release a child to someone you designate, if you are not able to pick up your child. During times of emergency remember that school telephones may be overwhelmed with calls.



Chapter 8: HAZARDOUS MATERIALS

Hazardous materials are any material that is flammable, corrosive, and oxidizing agent, explosive, toxic, poisonous, etiological, radioactive, nuclear, unduly magnetic, a chemical agent, biological research material, compressed gases, or any other material that because of its quantity, properties, or packaging, may endanger life or property.

Risks:

- ◆ In Delaware over 40 HAZMAT spills occur each year - approximately 75% involve petroleum products.
- ◆ 3,640,000 tons of petroleum products are shipped on Delaware waterways.
- ◆ 100,000 tons of hazardous materials are transported by rail in Delaware.
- ◆ There are 1,799 miles of pipeline in Delaware.
- ◆ There are 3,500 miles of roadways through Delaware that support the transport of gasoline, fuel oil, propane and hazardous substances.

Dover AFB Risks:

- ◆ Primary port for movement of materials to and from overseas installations.
- ◆ Largest Aeroport on East Coast.
- ◆ Hazardous materials transported on and off-base daily.

What Are the Actions You Might Need to Take?

If Ordered to Evacuate:

Stay calm.

Take your disaster supply kit with you.

Pets are now allowed to shelter with you. Ensure you bring their crate and food.

As you leave, turn off all appliances (except for refrigerator/freezer) and all lights, heating, cooling, and ventilation systems.

Limit phone usage unless absolutely necessary, and keep calls to a minimum.

Keep car windows and air vents closed.

Refer to Attachment 5 and 11.

If Ordered to Shelter In Place:

Stay inside your home/facility

If outdoors, go inside until told to do otherwise.

Close all doors and windows, turn off all heating, cooling, and ventilation systems.

Listen to radio and TV for further information.

Refer to Attachment 13

Chapter 9: NUCLEAR POWER PLANTS

Risks:

Salem-Hope Creek Nuclear Generating Stations

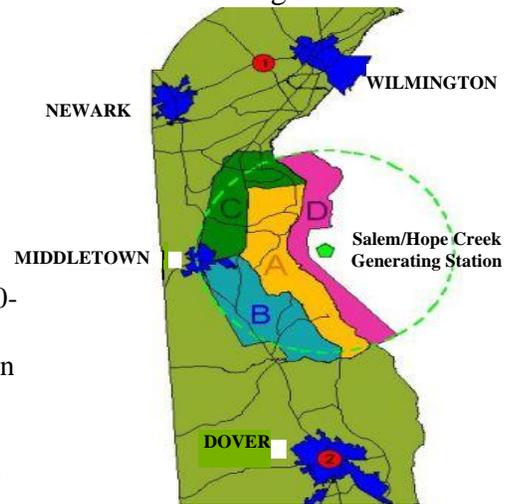
The Salem-Hope Creek Nuclear Reactors are located on a 700-acre site near Salem, NJ, approximately 18 miles south of Wilmington, DE. Based on 2000 Census data, 24,976 Delawareans live in the 10-mile Emergency Planning Zone (EPZ) of the Salem-Hope Creek Nuclear Power Plant. The northeast corner of Kent County is within this EPZ.

Peach Bottom, PA

The Peach Bottom nuclear reactors are located on a 620-acre site in Peach Bottom Township, York County, PA. Kent County is within the 50-mile Ingestion Exposure Pathway of the Peach Bottom Nuclear Generating Station.

Calvert Cliffs, MD

The Calvert Cliffs nuclear reactors are located in Lusby, MD on the western shore of the Chesapeake Bay. Kent County is within the 50-mile Ingestion Exposure Pathway of the Calvert Cliffs Nuclear Power Plant.



Radioactive materials associated with these power plants are transported to, through, and by Dover AFB by rail, air, and highway.

Types of Emergencies:

Unusual Event: A minor problem has taken place. No release of radioactive matter is expected. Federal, state, and county officials will be notified. You will not have to do anything.

Alert: This is also a minor problem. Small amounts of radioactive matter could be released inside the plant. Officials will be notified and asked to stand by. Probably, you will not have to do anything.

Site Area Emergency: This is a more serious problem. Small amounts of radioactive matter could be released into the area near the plant. Sirens may be sounded. Tune your radio to one of the EAS radio stations listed in the introduction on page 1.

General Emergency: (Refer to Attachments 6 – 8 and 13). This is the most serious kind of problem. Radioactive matter could be released outside the plant. You may have to take protective actions. Sirens will be sounded. Tune your radio to one of the EAS stations.

Protective Action Procedures:

If Directed to Take Shelter:

Follow instructions from DAFB or State of Delaware emergency notification systems. Refer to Attachment 13 if directed to shelter within your home or workplace.

When Directed to Evacuate:

Show emergency workers you have left. Tape **Attachment 11: Evacuation Notification** sign on your front door. Tune to an EAS radio station and follow instructions from officials

ATTACHMENT 1: DAFB Evacuation Policy.

Department of Defense military, civilian, and dependant personnel if released by their unit, may evacuate at any time they feel they are in a hazardous situation.

An evacuation directed by the 436th Wing Commander provides for reimbursement of allowances. There are two types of evacuations; Evacuation and a Limited Evacuation. Hurricanes will most likely result in a limited evacuation

While civil authorities may order an evacuation, they cannot obligate government funds. Therefore, an order by local civil authorities does not create an authority for evacuation allowances.

The Wing Commander may specify a limited evacuation location area. Any Safe Haven is a location distance (i.e. 750 miles radius) from the evacuation location, or any CONUS Safe Haven location as appropriate (JFTR Volume 1, Chapter 6 and JTR, Volume 2, Chapter 6, Part D.).

If TDY, the Wing Commander may extend TDY orders at current duty station until safe to return to home station. If on leave status: the Wing Commander may extend leave or convert to TDY status and require personnel to report to nearest military installation.

Regular civilian salary continues throughout the evacuation in accordance with 5U.S.C.5523. You also receive travel, mileage, and per diem for yourself and dependents.

Prior approval to evacuate must be given in order to be given any financial reimbursement to and from Safe Haven.

Reimbursement for trips to and from the safe haven area to “check” damages are not authorized.

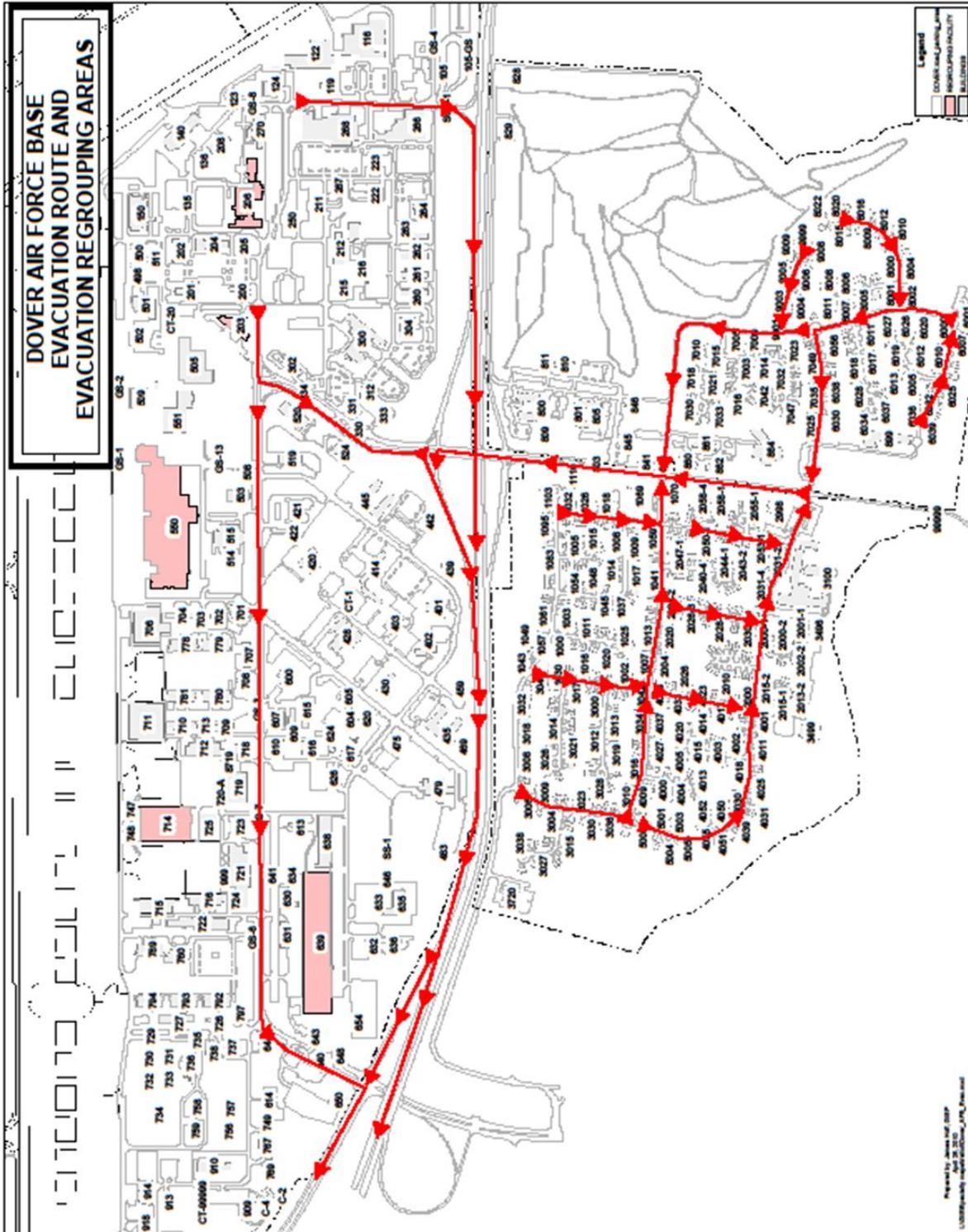
*To report Individual or family member status log into: <https://afpaas.af.mil> or call **1-800-435-9941**,

If we have to evacuate, more detailed instructions will be provided via the installation notification and warning system, door to door, or radio and television messages.

When Directed to Evacuate:

Show emergency workers you have left. Tape **Attachment 11: Evacuation Notification** sign on your front door.

Tune to an EAS radio station (listed in Chapter 1) and follow instructions from officials.



Dover AFB Primary Evacuation Routes

ATTACHMENT 2: Kent County Evacuation Routes

The primary evacuation routes as identified in the Kent County Transportation and Event Management Plan are indicated in the table below. These routes are all unlimited access roadways with numerous entrances and exits. Therefore, it will not be possible to limit access to the designated primary evacuation routes during an emergency and it is anticipated that traffic flow will continue normally along these routes. It is expected that evacuees will utilize the outbound lane(s) with emergency vehicles being directed to the inbound lane(s). All primary evacuation routes are identified with signage. TMC with assistance with Delaware State Police and local law enforcement agencies will provide traffic control along the designated evacuation route.

ROUTE	FROM	TO
1	Kent/Sussex Boundry	Kent/Newcastle Boundry
13	Kent/Sussex Boundry	Kent/Newcastle Boundry
113	Kent/Sussex Boundry	US 13

ROUTE	FROM	TO
Woodland Beach Rd	Delaware Bay	Route 9
Port Mahon Rd	Delaware Bay	Route 9
Pickering Beach Rd	Delaware Bay	Route 9
Kitts Hummock Rd	Delaware Bay	Route 9
Bowers Beach Rd	Delaware Bay	Route 1
Milford Neck Rd	Delaware Bay	Route 1
Thompsonville Rd	Delaware Bay	Route 1
Big Stone Beach Rd	Delaware Bay	Route 1

Secondary Evacuation Routes

A network of secondary routes direct local traffic to primary evacuation routes and can also be used to reroute traffic in the event primary routes become impassible. These routes are also identified with signage and will be controlled by TMC and DSP in conjunction with Local law enforcement agencies. These routes are indentified in the table below.

NORTH/SOUTH

ROUTE	FROM	TO
9	SR 1	Kent/New Castle Boundry

EAST/WEST

ROUTE	FROM	TO
300	US 13	DE/MD Border
42	Route 9	Route 1
8	Route 9	DE/MD Border
15	Route 14	US 13
12	Route 1	US 13
14	Route 1	DE/MD Border

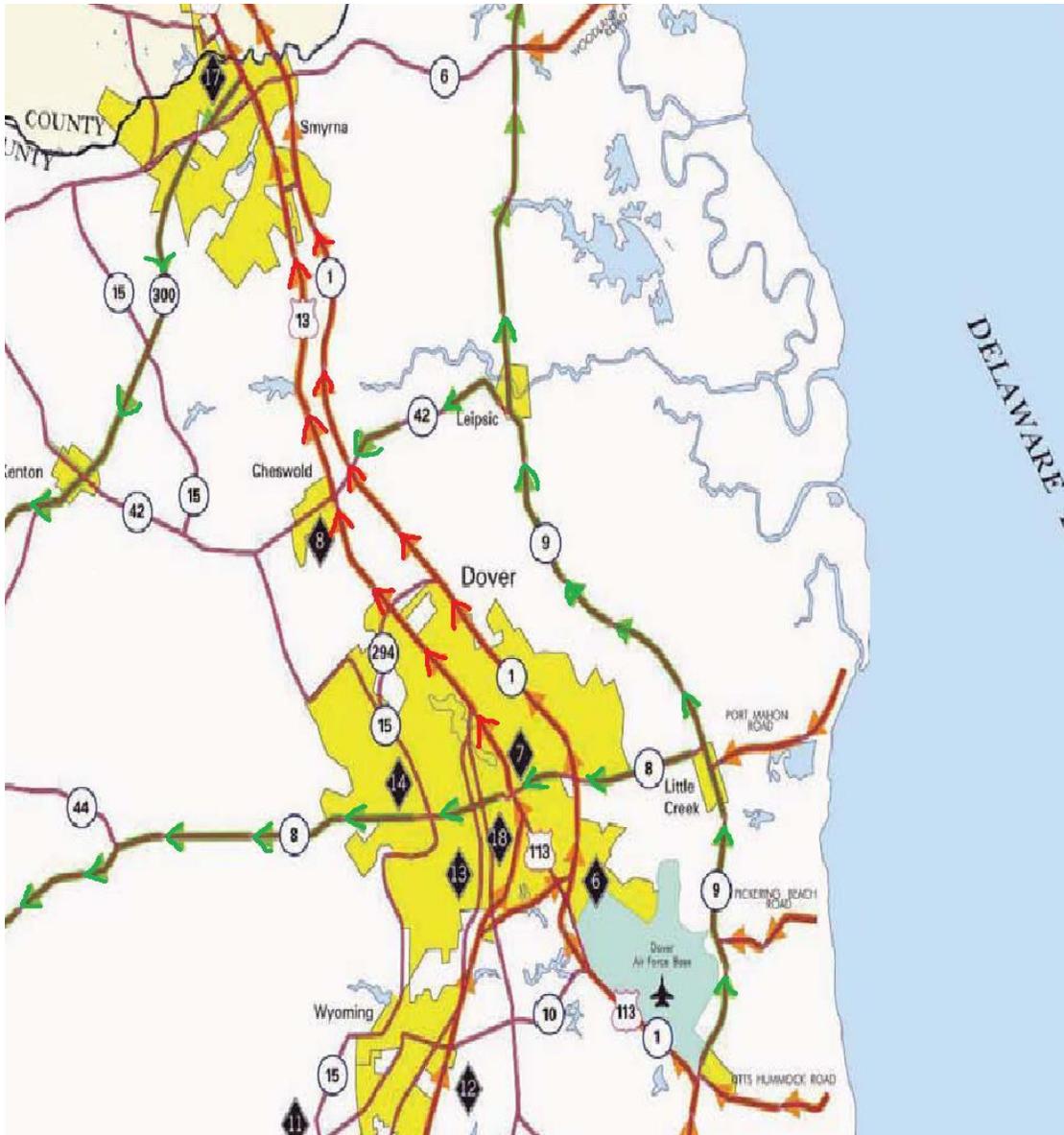
Local Routes

Local Municipalities will perform traffic management and control along local roads i.e. roads not identified as primary or secondary evacuation routes.



Evacuation Route Marker Signs

ATTACHMENT 3: Delaware Evacuation Routes



ATTACHMENT 4: Natural Disaster Sheltering

Natural sheltering normally takes place in the home, workplace or dormitory. Personnel will remain there unless directed to report to a designated shelter by the 436 AW/CC.

Natural Disaster Shelters for Dover AFB are:

Building	Wind Limits	OPR	Capacity	Gen Power
550	105 MPH	436 th APS	445	No
206	90 MPH	Det 3 – 373 TRS	600	No
639	90 MPH	436 th LRS	500	Yes - Comm. Section only
203	90 MPH	436 AW/CP/XP/LRS	300	Yes
300	90 MPH	436 MDG	380	Yes
714 E/W/C	90 MPH	436 MXS	2200	Yes

***CPTS, FSS, and SFS shelter in Bldg 639.**

- 436 AW and staff shelter in Bldg 203.
- 436 OSS shelters in Bldg 206.

*Shelter capacities listed above were determined by an engineering analysis performed by the 436 CES/CEX in Jan 2005.

Mass Evacuation (Categories 3-5): If the CAT directs mass evacuation for DAFB Ride-out and recovery teams will use the following facilities:

Building	Wind Limits	OPR	Capacity	Gen Power
600	90 MPH	436 CES	100	Yes
727	90 MPH	436 CED (EOD)	15	No

ATTACHMENT 5: Delaware Shelter Locations

NEW CASTLE COUNTY SHELTERS

Number	Shelter Location (see notes 1, 2)	Capacity
1	Archmere Academy	200
2	Claymont High School	100
3	Colwyck Elementary School	200
4	George Reed Junior High	100
5	Gunning Bedford Jr. High	500
6	Harry O. Eisenberg Elementary	400
7	Holy Rosary School	150
8	Maple Lane Elementary School	550
9	May B. Leasure Elementary School	480
10	Middletown High School	500
11	Mount Pleasant High School	200
12	Our Lady of Fatima School	300
13	Pierre S. DuPont Elementary School	100
14	Pleasantville Elementary School	360
15	Redding Middle School	100
16	Silver Lake Elementary School	200
17	Townsend Elementary School	100
18	Wallace Wallin School	150
19	William Penn High School	500
20	Wilmington High School	250
	Total Capacity	5540

KENT COUNTY SHELTERS

Number	Shelter Location (see notes 1, 2)	Capacity
1	Archmere Academy	200
2	Caesar Rodney High School	500
3	Dover High School	750
4	Hartley School	85
5	Lake Forest High School	565
6	Smyrna High School	400
7	Blue Hen Mall	(Note 3)
8	DOT Administrative Building	(Note 3)
	Total Capacity	2300

SUSSEX COUNTY SHELTERS

Number	Shelter Location (see notes 1, 2)	Capacity
1	Archmere Academy	200
2	Cape Henlopen High School	1000 (see note 3)
3	Delaware Tech. & Comm. College	500
4	Delmar Jr./Sr. High School	800
5	Early Childhood Education Center	300
6	East Millsboro Elementary School	400
7	Douglass Intermediate School	450
8	Georgetown Elementary School	1000
9	H.O. Brittingham Elementary School	400
10	Howard T. Ennis School	400
11	Indian River High School	800
12	Indian River Senior Center	100
13	Laurel Central Middle School	500
14	Milford High School (in Kent Co.)	1000
15	Milton Junior High School	600
16	North Laurel Elementary School	100
17	Phillip C. Showell School	300
18	Rehoboth Junior High School	730
19	Savannah Road Elementary School	400
20	Seaford Central Elementary School	500
21	Seaford Middle School	500
22	Selbyville Middle School	250
23	Sussex Central High School	800
24	Sussex Central Junior High School	800
25	Sussex County Vo-Tech Center	500
26	West Laurel Elementary School	200
27	West Seaford Elementary School	500
28	Woodbridge Elementary School	400
29	Woodbridge Jr./Sr. High School	600
	Total Capacity	15,100

Notes:

1. Facilities have been designated by the American Red Cross as possible hurricane shelters.
2. Facilities are not in a riverine or tidal flood hazard area except as noted.
3. Facility not in a flood hazard area; however, access problems due to tidal flooding on Route 269 are possible during Category 3 & 4 hurricanes.

ATTACHMENT 6: Family Disaster Plan

◆ This checklist is designed to help you prepare for potential disasters. Relief workers may not be able to reach you immediately during or after a disaster. You should try to be prepared to survive on your own.

◆ This checklist applies to all disaster situations, although all actions may or may not be required. Use this as a basic guide to prepare your family for the worst possible scenario.

Pre-Disaster Preparation:

- Prepare a home survival plan and review it with the entire family.
- Know the elevation of your home above sea level and how safe it is from flooding.
- Pre-plan routes to safety if you have to evacuate, if evacuation routes are not pre-determined.
- Gather/inventory supplies for your Family Disaster Survival Kit.
- Place your survival kit in an accessible location that all family members know about. Keep the items you would most likely need in case of an evacuation in an easy-to-carry container such as a backpack or duffel bag.
- If you own a boat, have a plan to secure it if high winds are expected.
- Trim back any dead wood from trees around your home.
- If you live in a mobile home, check your tie-downs.

When a Disaster "Watch" is issued:

- Test your transistor radio, flashlights, lanterns, etc.
- Inventory your Family Survival Kit.
- Keep automobile fully fueled.
- Collect water storage containers.
- Ready materials for protecting windows and for making emergency repairs (i.e. plywood, plastic sheeting, etc.).
- Moor or move boat to safety.
- Secure lawn furniture and other outdoor items that may be blown around by high winds. These items can become missiles of destruction.
- Check supplies of special medicines.
- Check/inventory first aid kit and fire extinguishers.
- Notify relatives or close friends of your evacuation route.
- Monitor the radio and TV.

When a Disaster "Warning" is issued:

- Stay tuned to radio, local television and base channel 24, and/or emergency radio stations.
- Stay home if it is sturdy and on high ground. (Unless ordered to evacuate)
- Fill water containers, bathtubs, cooking pots, etc. (with water)
- Set refrigerator/freezer to highest settings.
- Move valuables upstairs or off the floor.
- Bring in pets.
- Only use the telephone for emergency.
- If high winds are expected, tape up windows and wedge sliding doors.
- Secure boats on trailer close to house.
- Be prepared for emergency evacuation.
- Leave mobile homes and go to a designated shelter.
- Leave any areas that might be affected by storm tide/flooding.

ATTACHMENT 6: (Continued) Family Disaster Plan

When Evacuation Order is given:

- Shut off water, gas, and electricity at mains and then leave immediately. (See Atch 6).
- Travel light. (i.e., important papers, small valuables, emergency supplies.).
- Bring your pets in crates with food and water.
- Exercise extreme caution when driving to shelter.

During the Storm:

- Stay indoors on the downwind side of the building and away from windows.
- Keep monitoring local radio, TV, and weather radio broadcasts. Remain calm but ready to move as necessary.

When "All Clear" has been given:

- Stay indoors unless emergency repairs are necessary. There may still be great danger from fallen power lines, etc.
- Stay in shelters until released.
- Don't go sightseeing; you'll only hamper emergency/rescue response personnel and you might endanger yourself.
- If you must travel, do so with extreme caution. Watch for heavy debris, road washouts, downed power lines, etc.
- Take extra precautions against fire.
- Report broken or damaged water, gas and electrical lines.
- Follow all instructions of emergency response personnel.
- Monitor local radio and TV for official bulletins and recovery information.

Location of Important Papers

It is extremely important to have valuable papers stored in a safe location. Listing the location of these items will help you or a relative find them if necessary:

- Birth Certificates: _____
- Marriage License: _____
- Wills: _____
- Medical Insurance Policies: _____
- Life Insurance Policies: _____
- Auto Insurance Policies: _____
- Home Insurance Policies: _____
- Mortgage Papers: _____
- Property Deeds: _____
- Tax Records: _____
- Military Papers: _____
- Savings Account: _____
- Checking Account: _____

IRA, Credit Cards, etc.

Other Papers and Small Valuables:

ATTACHMENT 7: Family Emergency Supplies Checklist

Stocking up on emergency supplies can add to your safety and comfort during and after a disaster. Store enough supplies for at least 72 hours.

Asterisk (*) items are suggestions for evacuation.



Water & Non-Perishable Food:

- Water - 1 gallon per person per day (two quarts for drinking, two quarts for food preparation/sanitation.*
- Ready-to-eat canned meats, fruits, and vegetables.
- Canned juice, milk, and soup.*
- Sugar, salt, and pepper.
- High-energy foods, like peanut butter, jelly, crackers, granola bars, and trail mix.*
- Vitamins.
- Comfort/stress foods - cookies, hard candy, sweetened cereals, lollipops, instant coffee, and tea.*

First Aid/Medical Supplies:

- Prescription drugs.
- First aid kit.*
- Pain relievers.
- Anti-diarrhea medication.
- Antacid & Laxative.
- Emetic (to induce vomiting if advised by Poison Control Center).
- Rubbing alcohol.
- Antiseptic or hydrogen peroxide

Tools and Supplies:

- Portable radio, flashlight and spare batteries (or hand cranked).*
- Fire extinguisher -- A-B-C type.
- Tool kit including a screwdriver, pliers, and a hammer.
- Axe, shovel & broom.
- Adjustable wrench for turning off gas .
- Can opener (non-electric).*
- Knife & scissors.
- Cash and change.*
- Paper plates, cups & plastic utensils.*
- Heavy-duty aluminum foil.
- Camping stove for outdoor cooking (caution: before using fire to cook, make sure there are no gas leaks; never use charcoal indoors).
- City map.*
- Paper & pencil.*
- Candles and waterproof matches.*
- Large plastic trash bags for waste; tarps and rain ponchos.
- Large trash cans.



Sanitation Supplies:

- Paper towels.
- Toilet paper.*
- Baby wipes.*
- Shampoo.*
- Toothpaste and toothbrushes.*
- Feminine hygiene supplies.*
- Personal hygiene items.*
- Household bleach.



Clothing and Bedding:

- Sturdy shoes or work boots.*
- Heavy gloves for clearing debris. *
- Blankets or sleeping bags.*
- Change of clothing.*
- Cold weather gear



Special Items:

- Baby supplies: formula, bottle, pacifier, clothing, blankets, baby wipes, disposable diapers, canned food, and juices*
- Food, water, and restraint (leash or carrier) for pets.
- Remember family members with special needs; such as elderly or disabled individuals.
- Entertainment - Games & books

Important Family Documentation:

- Keep these records in a waterproof, portable container.
- Wills, insurance policies, contracts, deeds, stocks and bonds.
- Passports, social security cards, immunization records.
- Bank account numbers
- Credit card account numbers and companies.
- Inventory of valuable household property.
- Family records. (birth, marriage, death certificates)



Emergency Car Kit Include:

- Battery powered radio, flashlight
- Extra batteries
- Blanket
- Booster cables
- Fire extinguisher (5 lb., A-B-C type)
- First aid kit and manual
- Bottled water and non-perishable
- High energy foods such as granola bars, raisins and peanut butter
- Maps, shovel, flares
- Tire repair kit and pump



ATTACHMENT 8: Emergency Contact Numbers

Statewide Emergencies:	Dial 911
Delaware Emergency Management Agency (DEMA):	Web Site: www.state.de.us/dema (302) 659-DEMA (3362) (877) SAY-DEMA (877-729-3362) Delaware only, Fax (302) 659-6855
New Castle County Office of Emergency Preparedness:	(302) 573-2855, Fax (302) 573-2866
City of Wilmington Emergency Management Office	(302) 571-4430, Fax (302) 571-5491
Kent County Division of Emergency Preparedness Liasion Office	(302) 735-2200, Fax (302) 735-2186
Sussex County Emergency Operations Center:	(302) 855-7801, Fax (302) 855-7800
Maryland Emergency Management Agency (MEMA):	(410) 517-3600
Virginia Department of Emergency Management (VDEM):	(804) 897-6500
American Red on Cross Dover AFB (ARC):	(302) 677-2855, After Hours (302) 677-3000
Dover AFB Emergency Management Flight	(302) 677-6212/6213
DAFB Command Post	(302) 677-4201
436 Medical Group	(302) 730-4633
436 Security Forces Squadron	(302) 677-4666
Dover AFB Fire Department	(302) 677-4401
Caesar Rodney School District <i>219 Old North Road</i> <i>Wyoming, DE 19934</i> http://www.cr.k12.de.us/	Phone - 302.697.2173 Fax - 302.697.3406

**ATTACHMENT 9:
How to Purify and Store Water for Drinking, and Clean
With Limited Water**



Procedures for Purify and Store Water for Drinking and Clean with Limited Water are Listed Below:

How to Purify Water for Drinking:

- If water is polluted, strain water through paper towels, paper coffee filters, or several layers of clean cloth to remove any sediment or floating matter.
- Boil water vigorously for 5 minutes; add 1 minute for every 1,000 feet of altitude.
- If boiling is not possible, strain as above and treat by adding ordinary liquid chlorine household bleach, or tincture of iodine. (*Do not use granular bleaches, they are poisonous*) Use an eyedropper to add bleach or iodine. (Use the eyedropper for only this purpose).
- Mix thoroughly by stirring or shaking water in container; let stand for 30 minutes. A slight chlorine odor should be detectable in the water. If not, repeat the dosage and let stand for an additional 15 minutes before using.

Water purification tablets are available in drug stores and sporting goods stores, and are recommended for your first aid kit. Water purification tablets have a shelf life of 2 years and lose their effectiveness if allowed to get damp.

Liquid Chlorine 4-6%	Clean Water	Cloudy Water
Common Household Laundry Bleach	2 Drops Per Quart	4 Drops Per Quart
	8 Drops Per Gallon	16 Drops Per Gallon
Tincture of Iodine 2%	3 Drops Per Quart	6 Drops Per Quart
	12 Drops Per Gallon	24 Drops Per Gallon

How to Store Purified Water

To keep drinking water safe from contamination, it should be stored in carefully cleaned, non-corrosive, tightly sealed containers. Use gallon containers, preferably made of heavy opaque plastic with screw-on caps.

Sterilize Containers:

- Wash bottles with soapy water, then rinse thoroughly.
- Run about 3 quarts of water into one of the containers, then add ¾ of a cup of bleach to the water. Remember this is still the sterilization process; water is not fit for drinking.
- Shake well, turning upside down a time or two so that the stopper will be sterilized too.
- Let stand for 2-3 minutes, then pour the water/bleach mixture to the next container. Fill containers and close each cap tightly. Label each with the preparation date and mark them “Purified Drinking Water”.
- Some stored water may develop a disagreeable appearance, taste, or odor. These properties are not harmful. Inspect your supply every 6 months to see if the containers have leaked or other undesirable conditions have developed. Replace water if it seems objectionable.

- If stored water tastes flat after opening, it probably lacks air. To aerate the water simply pour the water from one container to another 3 or 4 times.
- Do not use water stored in vinyl containers (such as waterbeds) for drinking. The vinyl may release toxic chemicals into the water.
- Use of swimming pool water can cause diarrhea due to the heavy concentration of chlorine. Use this source of water only after other sources have been exhausted and purify it before use.

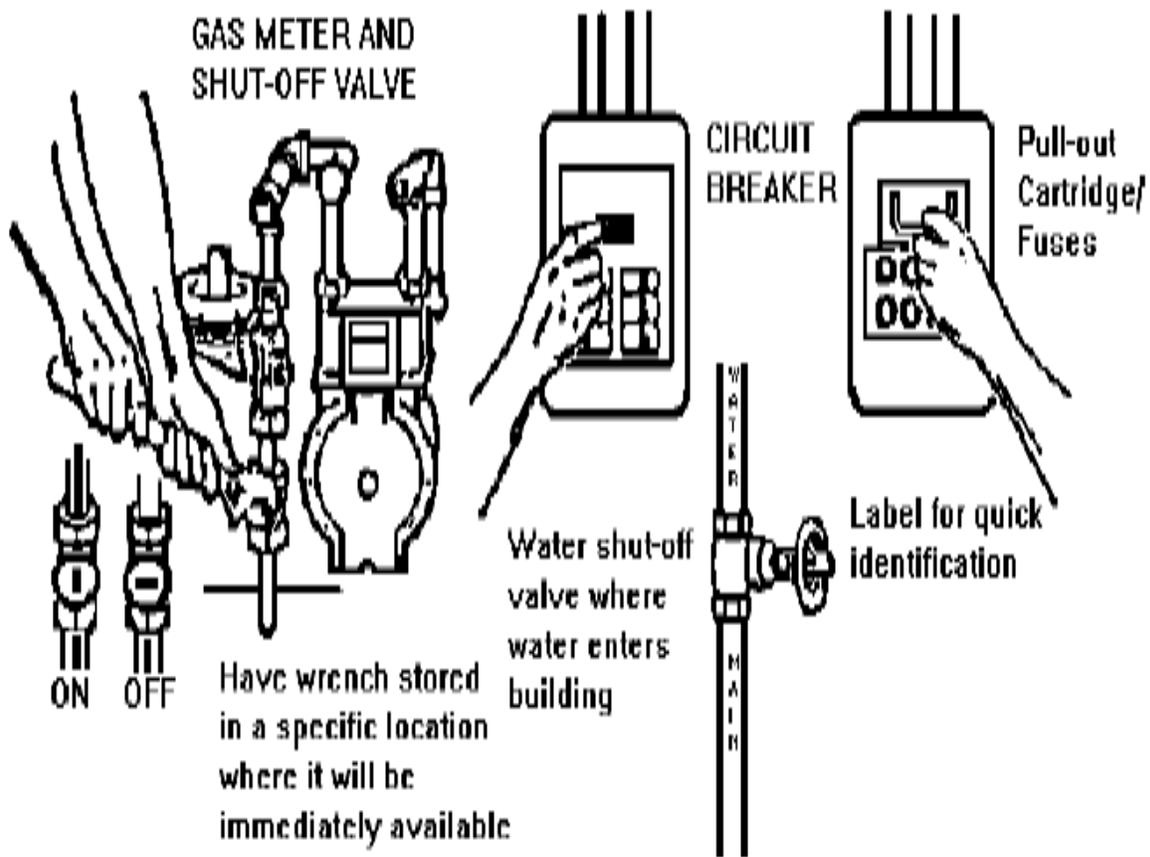
Maintaining Hygiene with Limited Water:

Your skin can be kept fairly clean by rinsing off each day with just a cup of water, while gently rubbing with a damp cloth. Use about 2/3 of the water for the first rinse, starting from the face down and gently rubbing the neck, armpits, stomach, groin, posterior, legs and feet. Then use the remaining water to rinse off again, using bare fingers. If boiled water is available, sterilize washcloths every day by boiling them for a few minutes. Sleep as coolly and as bare as practical to dry the maximum skin area. Wash or disinfect clothing as much as possible, especially underwear and socks. Disinfecting clothing, not laundering it, is the most important health objective under difficult shelter conditions. Wear shoes or sandals when walking around.



ATTACHMENT 10: How to Shut off Water, Gas, and Electric in Emergencies

The following are just some examples of the most common types of shut-off valves and switches. The ones in your home may be different. Educate yourself on the proper procedure for your home.



Prior to attempting shut-off of utilities to your home contact your service provider, land lord or development manager to have the best shut-off locations identified and instructions given on proper technique.

ATTACHMENT 11: Notification Poster

This Home has been

NOTIFIED

Of the Evacuation

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ATTACHMENT 13: DAFB Shelter-In-Place Guide

This guide contains information on what to do if you are directed to “Shelter-In-Place” in the event of a hazardous materials emergency, terrorist use of chemical materials or any airborne hazard.

All Unit Emergency Management (EM) Representatives and Shelter-in-Place Managers (usually Bldg facility manager) will include this pamphlet as part of their unit EM information program and ensure unit members are familiar with the specific shelter-in-place procedures for their work center.

Part I: General Shelter-In-Place Information:

Hazardous Materials and Chemical/Airborne Emergencies.

- Before an Emergency Occurs.
- During an Emergency.
- After an Emergency.

Part II: Developing Facility Shelter-In-Place Plans and Checklists for

Hazardous Materials and Chemical/Airborne Emergencies:

- Additional considerations.
- Shelter-in-Place (SIP) checklists for managers and all shelterees.
- What to do if caught outside during SIP.
- Instructions for Dorm residents and temporary housing residents.

PART I - General Shelter-In-Place Information

Hazardous Materials Emergencies, Airborne Hazards:

Dover AFB is vulnerable to the health and safety impacts of a hazardous materials emergency. These types of emergencies can result from accidents or sabotage that occur at a wide variety of places such as the nearby highways or large storage tanks facilities, or from terrorist use of chemical materials. When these events occur, emergency response officials have two basic tools to protect personnel. One is to evacuate out of the area affected by the toxic cloud. The other is to direct “shelter-in-place”. That is, go indoors, close up the building, and wait for the danger to pass. Either way, you must follow the directions of the emergency responders exactly, use good common sense, and act **quickly** to ensure your safety.

Evacuation has long been used to move the public away from danger during emergency situations. However, evacuations can take a very long time to complete and can actually expose some people to more danger than if they just sheltered in place. For chemical releases of limited duration, it is faster and usually safer to shelter-in-place than to evacuate. **In all the real-world hazardous materials emergency cases studied by the National Institute for Chemical Studies, there were no fatalities associated with shelter-in-place.**

Shelter-in-place is used if a migrating toxic vapor cloud could quickly overtake unprotected or evacuating citizens, or evacuation would create problems that would outweigh its usefulness. The amount of protection from shelter-in-place depends mainly with the air tightness of the building and the length of time the building is exposed to a hazardous plume. Modern, energy efficient, and weatherized homes and workplaces provide the most effective air movement barrier. However, even the most weather-tight structure will slowly allow contaminated air to enter. Sealing windows, doors, and vents with plastic sheeting and duct tape can further reduce infiltration of contaminated air into a building.

Other factors that affect the level of protection provided by shelter-in-place are weather conditions and behavior of the threatened population. **One thing to keep in mind is shelter-in-place is for short term (2-4 hours or less) protection, not sheltering like what is recommended for hurricanes or the old nuclear warfare shelter program.**

The most important factors, however, are the actions of the people (military and civilian) at risk from an Airborne Hazard. *To maximize the protective value of shelter-in-place, threatened people must know how to shelter quickly and effectively.*

Before an emergency occurs:

- Ensure all assigned personnel have access to this guide and are at least familiar with the concept of shelter-in-place.
- Contact CE Customer Service @ 677-4763 for guidance on turning off facilities HVAC systems.
- Select a room or rooms to serve as shelter rooms during chemical emergencies. The rooms should be large enough to accommodate all unit personnel. A shelter room should have as few windows, vents, and doors as possible. A windowless room is best.
- Ensure when selecting shelter rooms, take into account the “peak population” for your facility. That is the time period for which the most number of people could be in your building due to meetings, classes, or heavy business traffic.
- Break rooms or conference rooms with few or no windows can be used for shelters. Hallways are sometimes used in institutional type settings.
- Store required supplies so they are easily accessible in or very near the selected shelter area.

Your SHELTER-IN-PLACE KIT CONTENTS:

- **Pre-cut plastic sheeting to fit over any windows or vents in the sheltering area.**
- **Rolls of duct tape to be used to secure the plastic over windows/vents and to seal doors.**
- **Telephone and computer with LAN.**
- **Flashlight and fresh batteries (any automatic light source).**
- **If needed, enough towels to block the bottoms of each door in the room.**
- **Water source (stored bottled, labeled water) to wet the towels for sealing door bottoms.**
- **First aid kit with instruction manual (usually located inside kit).**
- **Fire extinguisher.**
- **Recommend but not required: step ladder.**

Check your shelter kit on a regular basis. Duct tape and first aid supplies can sometimes disappear when all employees know where the shelter kit is stored. Batteries for the flashlight should be kept fresh. All the items do not necessarily have to be kept in a box, but they should always be readily available.

During an emergency:

- *Make sure everyone gets the warning. If you are outside, seek shelter indoors immediately. Keep in mind - you may not be at or near your unit when SIP is announced. **Run to the closest populated building to your location.***
- *Unless you have an emergency in your shelter, stay off the phone, including personal cell phones. It is critical to keep lines free for fire, police, medical, other responders, for people reporting emergencies to 911, and for other official communications.*

These are the basic steps that must be taken to make a building an effective shelter. Use the checklist for your work center during an actual emergency:

- Close all exterior windows and doors. **Do NOT lock exterior door!** (Unless in FPCON Delta).
- Post “Shelter-In-Place is in Effect” (Attachment 1) sign on each facility entrance.
- Turn off all air handling equipment (heating, ventilation, and/or air conditioning).
- If part of your plan is to bring a phone or land mobile radio (LMR) to your shelter room, make sure you have it (prefer the phone already in place in SIP room).
- Go to a pre-determined sheltering room (or rooms).
- Seal windows and vents in shelter room with sheets of pre-cut plastic and/or duct tape.
- Seal the door(s) with duct tape around the top, sides, and, if possible, the bottom of the door. Sometimes the bottom of a door cannot be sealed with tape due to the materials the floor is made of or a large gap. If this is the case, use a wet towel at the bottom of the door. After sealing; lock SIP door, so no one opens after it is sealed. (Advise any one that arrives after SIP room door is sealed and locked to SIP in the nearest restroom).
- Turn on a TV or radio and listen for further instructions.
- When the “all clear” is announced, open windows and doors, turn on ventilation systems and go outside until the building’s air has been exchanged with the now clean outdoor air.

After an Emergency

- It is extremely important to ventilate and/or leave a structure after a contaminated cloud has passed. With tight buildings, any vapors that may have entered the structure during its exposure to hazardous vapors will leave the building very slowly. Chemicals that have sorbed onto building surfaces will also gradually desorb. If an occupant remains in the building without radically increasing the air exchange rate, exposure to the hazardous chemical will continue and dosage of that chemical will increase. By opening windows and turning on air moving equipment, the air exchange rate of the building will be substantially increased, and hazardous vapors will be removed at a greater rate.

PART II - Developing Shelter-In-Place Plans and Checklists for Hazardous Materials Emergencies

Unit EM representatives will assist facility managers/SIP managers in developing shelter-in-place plans and checklists. All facility managers/SIP managers on Dover AFB must develop specific procedures to implement shelter-in-place protection within their facility. Use the sample plan and checklist as a template. Additional information as well as case studies of hazardous materials incidents where “shelter-in-place” was used to protect the public can be found on the National Institute for Chemical Studies web site at <http://www.nicsinfo.org/SIP%20Center.htm>

Facility Managers/SIP Managers must carefully review the floor plan of their building and identify a room or rooms that will serve as temporary shelter for personnel working or visiting within the facility. Each SIP selected room (s) should have a shelter kit. It is the responsibility of each unit to plan, budget for, and acquire adequate and appropriate supplies for each of their facilities.

Additional considerations:

- Identify how the facility will be notified of an emergency situation and how to warn all occupants. *All personnel must know and understand how the warning will be passed within the facility.*
- This plan will not work unless the personnel assigned to your facility are familiar with it and participate in “shelter-in-place” exercises. Note: Do not use duct tape on wallpaper or painted surfaces during exercises. “Painters tape” can be used to show capability.
- Plan and execute drills on a regular basis and at different times of the year. Conduct some drills when people have opened windows and doors for ventilation (normally spring or fall). If the facility operates at night or on weekends, conduct drills at those times also. Get feedback from the participants and incorporate the lessons learned into your plan. Modify procedures for different shifts, if needed.
- Develop an accountability system. You should know who is in your building and where they are during the emergency. Ensure everyone signs in to the SIP room once SIP is initiated.

- Assign key duties to specific individuals and designate backups for each position, especially HVAC and ventilation system shut down.
- Consider marking or labeling the windows, doors, vents etc. that must be covered or sealed with plastic and tape.

SAMPLE PLAN

This is a simplified example of a plan that you could use for shelter-in-place actions. Modify it as necessary to make it work in your facility. Your plan should be more detailed, especially for large buildings.

- All personnel that hear the SIP announcement will spread the warning to the others in their work area with whatever means available, i.e. word of mouth, intercom, LAN ect.
- The Facility Manager and/or SIP manager to shutdown HVAC systems and then report to their shelter room.
- Ensure all personnel in the parking lot seek shelter, and then close the doors. At the **facility entrance, close doors but do not lock them (unless in FPCON Delta)**. This will allow emergency responders to access the building in the event of a medical emergency. Post the “Shelter-In-Place in Effect” sign on exterior of entrance door.
- All personnel will secure their work area (close windows and doors, secure classified material), and report to their assigned shelter area. SIP team will initiate ventilation shutdown and room sealing procedures. All will remain in SIP until the “all clear” is given.
- All Unit SIP Teams will report shelter room status/accountability and names of shelterees to the unit control center and/or EOC/ESF (Emergency Operations Center/Emergency Support Function) NLT 10 minutes after shelter-in-place is initiated.
- Minimize LMR traffic. No unofficial phone calls (including on personal cell phones) are allowed. The unit control center will maintain contact every 15 minutes with their shelter team. Keep in mind, they will most likely be sheltering also.
- Report medical, fire, or security emergencies via 911. Report these emergencies to the unit control center and or ESF ASAP, but do not delay 911 calls to do so.
- If evacuation is ordered, follow directions given by emergency officials exactly. Provide them with a copy of the diagram of the shelter room in the building. Do not delay or interrupt the evacuation to coordinate with or contact the unit control center, unless directed to by emergency officials.

- When All Clear is announced, ensure all classified material is secure, then ventilate building (open doors, windows, and turn on HVAC) then exit the building. Do not re-enter building until cleared to by emergency officials.

SAMPLE Shelter-in-place Procedures (Hazardous Materials Emergency)

Procedure	Responsible Individual	Needed Supplies/Equipment/Rules
Receive announcement via Giant Voice, radio, TV, PC (LAN Alert), phone, or from an Emergency Responder.	First person notified, all assigned	Crash phone, LMR, Giant Voice speaker, TV, PC
Initiate facility warning procedures and advise all personnel to report to designated shelter area.	Facility Manager, SIP manager, all assigned	Facility intercom, bull horns, air horns, runners, LMR, as necessary
Turn off ventilation systems in the Building.	Designated shelter monitors, Facility Manager,	Checklist, diagram, flashlight
Turn off all main air handling equipment switches.	Facility Manager, SIP manager	Checklist, instructions for shutdown, flashlight, keys to utility room
Make sure all doors and windows to the sheltering-in-place room are closed, locked. Post SIP sign on exterior door to Bldg.	Designated shelter monitor.	Checklist, diagram, flashlight, signs
Seal windows, doors, vents, and electrical outlets using plastic and duct tape.	Designated shelter monitor	Checklist, precut plastic sheeting and duct tape
Place moistened towels at bottom of doors.	Designated shelter monitor	Towels & water
Have all personnel in the area sign in.	Designated shelter monitor	Clipboard, sign-in roster pen/pencil
All Clear is given: Open all windows and doors and then leave the facility and report to pre-designated assembly area. Follow directions of emergency response personnel.		

SAMPLE Shelter-In-Place Checklist

SHELTER TEAMS

Primary Monitor _____ Alternate Monitors _____

When a shelter-in-place advisory is issued:

Announce, "A shelter-in-place advisory has been issued. All personnel should proceed to _____, which is our shelter room. Ensure all windows and doors to offices are closed before leaving."

Report any discrepancies to emergency response personnel (ESF representative, unit control center).

- Ensure all personnel sign in to SIP room. (sign in sheets should be in SIP kit).
- Post SIP activation sign on exterior door(s) to Bldg.
- Remove pre-cut plastic sheets and duct tape from shelter kit.
- Place plastic over windows and seal edges with long strips of duct tape.
- Place plastic over all vents and seal with long strips of duct tape.
- If necessary, wet a towel with water and place it at the bottom of the door.
- Close and lock door to SIP room and seal edges with long strips of duct tape. Be sure tape securely overlaps all edges of the door.
- Advise anyone arriving after the SIP door is sealed and locked to take shelter in the closest restroom.
- When the "All Clear" is announced, immediately remove the plastic from the windows and vents. Open the windows, if operable.
- Go outside to the pre-arranged assembly area.
When the building is thoroughly ventilated and you are instructed to by emergency response personnel, return to your office area.

SAMPLE Shelter-in-place Checklist

FOR ALL PERSONNEL IN BUILDING ###

When a shelter-in-place advisory is announced:

- Upon hearing the shelter-in-place announcement, close and lock all office windows.
- Immediately go to your shelter room and ensure any visitors accompany you. Close your office door when you leave. Follow instructions of SIP Team.
- Remain in the shelter area until the "All Clear" is announced. Immediately go outside to the pre-arranged assembly area. Make sure any visitors are escorted to the meeting area as well.
- After the building is thoroughly ventilated and upon instruction from emergency response personnel, resume normal operations.

If caught outside during Shelter-In-Place

- If you are caught outside in your vehicle after the SIP is announced and there is no time to get to a building; remain in vehicle. Turn off any fans, AC, or heat. Ensure windows are rolled up. Stay in vehicle until “all clear” is announced.

Dorm Residents OR Temporary Housing

In order to comply with the Shelter-In-Place Program, dorms residents are suggested to keep the following items on-hand (purchased by resident). They should be accessible in the event the resident is required to shelter for temporary protection from outside hazards.

1. 2 towels
2. Masking tape
3. Flashlight, extra batteries
4. Battery operated radio

If you are directed to Shelter-In-Place you will immediately do the following:

1. Grab the above items and proceed to your bathroom in your dorm room.
2. Wet towels with water from sink or shower and shove under door to prevent any hazardous gas/Airborne emergency from entering the bathroom.
3. Take masking tape and tape any openings around the door, i.e. louvers in door, top and sides of door; make it as air tight as possible.
4. Turn radio on to 94.7 or 97.7 FM for emergency updates.
5. Have flashlight easily accessible in case the electric power goes out.
6. Stay where you are until notified it is safe to vacate.

As you can see from the information above these requirements are pretty basic, require minimum equipment and supplies, and are easily implemented. Yet, taking these few steps may make the difference between living and dying.

These same procedures should also be implemented in your home. Just these few simple supplies and some very basic procedures will provide a “safe” area in any home.

Shelter In-Place Area



Building # _____

Room #: _____