



# Emergency Planning for the Calvert Cliffs Nuclear Power Plant



## Important Safety Information For Your Community and Annual Needs Survey **2023/2024**

Please read the entire brochure or have someone translate it for you. Discuss this information with members of your family, and then keep the brochure in a convenient place for future use.

### **ESTA INFORMACIÓN ES IMPORTANTE**

Por favor lea este panfleto o busque a alguien que se lo lea. Comparta esta información con su familia y mantenga este panfleto en un lugar conveniente para un uso futuro.

# What to Do in an Emergency

## Monitor and Prepare

Tune your radio or TV to one of the stations listed in this brochure. Monitor the radio or TV for emergency information and follow emergency instructions. People should prepare for possible evacuation (e.g. reunite with family members, assemble emergency kits, provide for pet needs, keep off of the road as much as possible).

## Keep Phone Lines Open

*Please do not make unnecessary phone calls.* Leaving phone lines open for emergency workers will help everyone involved. If you require assistance, call the emergency phone numbers broadcast on the radio or TV.

## Shelter-in-Place

Go indoors and stay there. Close all doors and windows and shut off any systems that draw in outside air, such as furnaces, fireplaces and air conditioners. Keep listening to the radio or TV for updates. Keep pets inside and shelter farm animals. If traveling in a vehicle, close windows and vents.

## If Instructed to Evacuate

In an evacuation, people in the affected area will be asked to go to local reception centers listed within this brochure. After this, they can stay at specified mass care centers or with friends or relatives outside the evacuation zone.

*Please do not try to pick up children or others at schools, hospitals, nursing homes or overnight campgrounds.* These facilities will be following their own emergency plans, and you would most likely miss connections. If evacuated, students, hospital patients and nursing home residents will be accompanied to relocation centers where their needs will be addressed. To find out where people are being moved, stay tuned to the radio or TV.

Plan for three days away from home, locking up and turning appliances off as you would for a weekend vacation. Pack all necessary items (See "Emergency Supplies"). Evacuate everyone in your home, following directions given on the radio or TV. These routes will have been selected as the safest ways out of the affected area.

NOTE: If time permits and if safe to do so, the public is encouraged to alert neighbors, by means other than the telephone, to ensure they heard and understand the warning signals and have transportation to reception centers.

## Shadow Evacuation

Persons should only evacuate when instructed to do so. Evacuation of individuals not within the declared evacuation area could impede evacuation traffic flow. Monitor the radio or TV and prepare to follow instructions.

## Staged Evacuation

You may be instructed to shelter-in-place until people in a higher risk area are evacuated. Monitor the radio or TV and prepare to follow instructions.

## Information for Farmers

When advised to do so, remove all livestock from pasture, shelter if possible and provide them with stored feed and protected water. The county U.S. Department of Agriculture representative will provide further instructions regarding the protection of livestock and foodstuffs.

## School Information

If your child's school is in session at the time evacuation is recommended, children attending schools located within the Emergency Planning Zone will be transported to designated host schools outside the area. They will remain under supervision until picked up by parents or guardians. These host schools have

been planned to coincide with main evacuation routes. Children whose homes are inside the Emergency Planning Zone, but who attend school outside the emergency planning zone, will not be sent home if an evacuation is recommended. They will either remain at the school or be transported to a host school or a mass care facility and be under supervision until picked up by parents or guardians. Contact school officials for more information.

### **Non-Public School and Day Care Information**

Parents and guardians with children attending non-public schools or day care facilities within the Emergency Planning Zone should become familiar with the facilities' emergency plans. Contact the facility operator for more information.

## **How to Prepare for an Emergency**

You never know when you might have to leave your home on short notice. A nuclear incident is only one possibility. Floods, fires, chemical spills or severe illness could occur at any time. Preparing now will help you respond more quickly in any emergency.

### **Emergency Kit**

Keep an emergency kit – portable radio, flashlight, extra batteries, extra car keys, first aid kit and other items – in a special place that the whole family can easily locate. Include this booklet in your emergency kit with your location marked on the map. Write a list of the items you would want to take if you had to leave home quickly and post the list in a convenient spot. Be sure to keep a supply of all the items on your list. Gather any important documents that you might need in an emergency and keep them together in a safe place that you can access quickly and easily.



### **Transportation**

Maintain your vehicle in good running order and keep the gas tank at least half full at all times. If you will need transportation in an emergency, use the attached reply card to notify local authorities now.

### **Pets**

Service animals will be permitted inside reception centers and shelters.

Pets will not be allowed inside all reception centers and shelters. Pet sheltering information will be available at the reception centers and shelters for your area.

Contact your respective County Emergency Management Agency for additional information.

## **Emergency Supplies**

- General first aid kit and any special medication
- Cash, credit, or ATM cards
- Important documents
- Change of clothing
- Personal health products (toothbrush, eye care, sanitary products, etc.)
- Baby formula, diapers, car seat, toys
- Special dietary foods
- Pet related supplies



# Nuclear Power and Public Safety

## Benefits and Potential Risks of Nuclear Power

Used properly, nuclear fission (the “splitting” of uranium atoms) is a safe, dependable source of electricity. It is reasonable, though, to be concerned about what might happen in the event of a serious incident at a power plant.

A power plant reactor cannot produce a nuclear explosion. The uranium fuel contains very little fissionable material. The complex structure of a nuclear power plant is designed to prevent the release of radiation. A serious incident, however, could allow some radiation to escape, most likely as a cloud, or “plume,” of radioactive steam that would be carried away from the plant by the wind. The degree of risk to the public would depend on the size of the plume, the direction and speed of the wind, and other factors.

## Emergency Planning for the Calvert Cliffs Area

Special plans have already been developed to protect the public in the event of a nuclear incident in your area. These plans give specific attention to people who – like you – live, work or visit within 10 miles of a nuclear power plant, the Emergency Planning Zone (EPZ). Procedures are in place to help protect you and other members of the public in the unlikely event of a nuclear emergency. If necessary, area officials would declare an emergency and take measures to ensure public safety.

This pamphlet addresses procedures for the Calvert Cliffs area. Please read and keep this material for future reference. Although it specifically addresses a potential nuclear accident, much of the information is useful in any major emergency.

### Warning Sirens

If you hear a siren, you should tune to one of the Emergency Alert System (EAS) stations listed in this brochure for official information. The sirens are full volume tested semi-annually in June and December. A monthly test is also conducted which operates the sirens for less than one minute. A siren may malfunction and inadvertently sound. If you feel a siren is malfunctioning, please contact your county emergency management officials at the numbers below:

Calvert County: 410.535.3491

St. Mary's County: 301.475.8016

Dorchester County: 410.228.2222

### Public Inquiry Telephone Numbers (During Emergencies Only)

Calvert County: 410.535.0314 and 0396

St. Mary's County: 301.475.4911

Dorchester County: 410.228.6988

### Siren Malfunction

A siren may malfunction and inadvertently sound. Some indications of a siren malfunction are a siren sounding for more than five minutes, or a siren sounding with no accompanying message on the Emergency Alert System.

### People With Access and Functional Needs

Local authorities have plans to assist and care for people who have access and functional needs. Anyone who lives within 10 miles of the plant and has access and functional needs should contact the County Emergency Management Agency office by calling:

Calvert County: 410.535.1600, ext. 2638

St. Mary's County: 301.475.4200 \*2124

Dorchester County: 410.228.1818

**Note:** If you or someone you know might not respond to warning sirens or radio broadcasts due to impaired hearing or other factors, please use the attached reply card to notify local authorities now.

## Potassium Iodide (KI)

Potassium Iodide (KI) is a nonprescription drug that may prevent the thyroid from absorbing radioactive iodine. KI is one type of protective action that may be recommended during a nuclear incident. KI should only be taken at the direction of the appropriate state and local authorities. Consult your physician if you have concerns about the safety of KI for your child or yourself. KI is effective in blocking the absorption of radioactive iodine only. Since it does not block the absorption of any other radioactive material, evacuation or sheltering in place may be the most effective and preferred protective actions.

**Calvert County Health Department: 410.535.5400**

**St. Mary's County Health Department: 301.475.4330**

**Dorchester County Health Department: 410.228.3223**

## Classification of Accidents

Should an accident occur at the Calvert Cliffs Nuclear Power Plant, there are four accident classifications you might hear reported on the radio or TV, or read about in the newspapers.

**UNUSUAL EVENT** — A situation is in progress or already completed which could potentially degrade the plant's level of safety or indicate a security threat to the facility. No releases of radioactive material requiring offsite actions are expected unless safety systems degrade further.

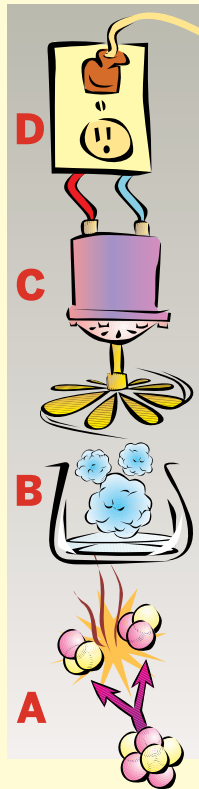
**ALERT** — Events are in progress or have occurred which have (or could) substantially degrade the plant safety; or, a security event that could threaten site personnel or damage to site equipment is in progress. Any offsite releases of radioactive material that could occur are expected to be minimal and far below limits established by the Environmental Protection Agency's (EPA) protective action guides (PAGs).

**SITE AREA EMERGENCY** — Events are in progress or have occurred which have caused (or likely will cause) major failures of plant functions that protect the public, or involve security events with intentional damage or malicious acts that could lead to the likely failure of (or prevent effective access to) equipment needed to protect the public. Any offsite releases of radioactive material are expected to remain below EPA PAG exposure levels beyond the site boundary.

**GENERAL EMERGENCY** — Events are in progress or have occurred which: a) have caused (or shortly will cause) substantial reactor core damage, with the potential for uncontrolled releases of radioactive material; or, b) involve security events that deny plant staff physical control of the facility. Offsite releases can be reasonably expected to exceed EPA PAG exposure levels beyond the plant site.

# What You Need to Know About Nuclear Power Plants and Radiation

## How Do Nuclear Plants Work?



Power plants create electricity by running steam turbines, which are powered either by fossil fuels – coal, oil, natural gas – or by nuclear power. Nuclear technology produces energy by splitting uranium atoms in a process called fission. (A) Fission generates heat that (B) boils water for the steam that runs the (C) turbines, which produce the (D) electricity that we all use – making, for instance, (E) toast for breakfast.

In a nuclear power plant, pea-sized uranium pellets are stacked inside long, thin fuel rods, which are grouped in “assemblies” inside a reactor “core.” The core is encased in a very thick steel capsule, and the entire reactor is further protected by an airtight steel and concrete building called a “containment.” This complex structure is designed to help ensure the safe utilization of nuclear power.

## How Do We All Benefit From Nuclear Power?

Any fuel used to produce energy also produces waste. By-products of coal-burning include smoke, ashes and slag. Even with the latest technologies, it is impossible to prevent some of this waste from reaching the environment outside the power plant. Nuclear power generation, on the other hand, produces waste primarily in the form of spent fuel, which is not released into the environment. Besides helping to protect the environment, nuclear energy is also highly efficient,

producing vastly more energy for its weight than coal or oil. We would have to burn more than 120 gallons of oil or up to a ton of coal to produce the same amount of energy as that found in a single pellet of uranium.

## What Is Radiation?

Radiation is energy in the form of rays or particles. Some atoms – the ones we call radioactive – are unstable. As they go through a natural process called “decay” in which they change into a stable atom, they throw off rays or particles called radiation. Radiation is exactly the same, whether from nature, or medical or industrial activities.

Radiation is measured in millirems. On average, a person receives about 300 millirem of radiation annually from natural sources and another 300 millirem or so from X-rays and other medical procedures. It takes more than 35 times this much – over 20,000 millirem in a single day – to produce identifiable effects in the body. Federal regulations allow workers to receive up to 5,000 millirem of radiation in the course of a year’s work.

## For More Information, Please Visit:

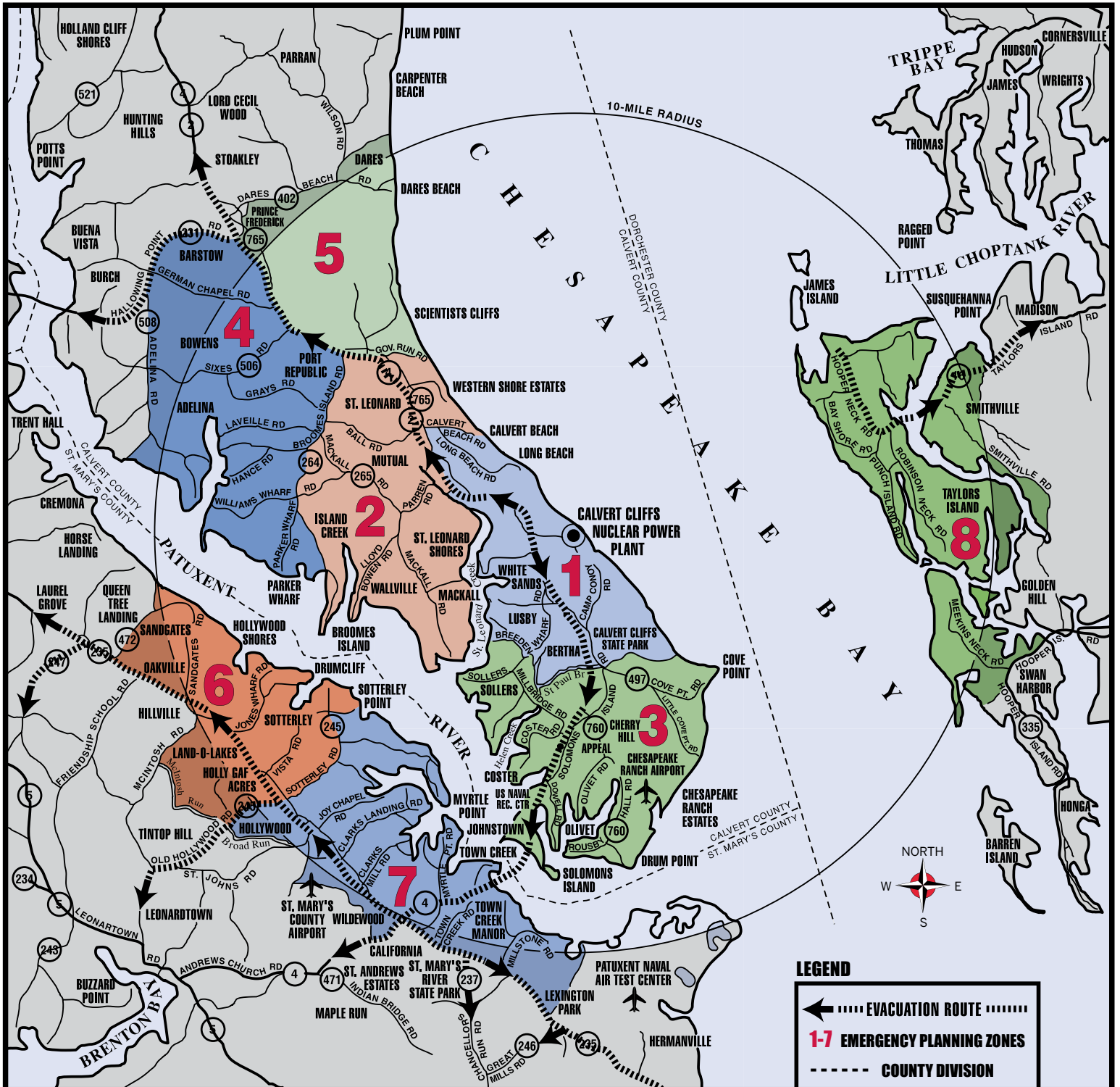
[www.calvertcountymd.gov/101/em](http://www.calvertcountymd.gov/101/em)

[www.stmarysmc.com/es](http://www.stmarysmc.com/es)

<https://dorchestercountymd.com/emergency-services-main/>

<https://mdem.maryland.gov/Pages/default.aspx>

# Emergency Planning Zone Map and Designated Evacuation Routes



# Emergency Planning Zones

The following zone descriptions will help you determine your zone. Knowing your zone number could be important in an emergency. If state or local officials direct residents to take shelter or to evacuate, the Emergency Alert System message broadcast over local radio stations and local public access cable television stations will identify the affected areas by zone number.

**My Zone Number is:** \_\_\_\_\_

## Zone 1

Bordered by Calvert Beach Road to the north; the Chesapeake Bay to the east; southern boundaries include Breeden Road/Sollers Wharf Road/Old Mill Road/Hellen Creek/St. Paul Branch/Route 497/Calvert Cliffs State Park; bordered by Route 2 and 4/St. Leonard Creek to the west.

### Examples of Communities in Zone 1:

Calvert Beach, Calvert Beach Estates, Flag Harbor, Long Beach, Walnut Cove, White Sands, Fort Hill and Mosley Acres.

### Zone 1 Includes:

Southern Middle School, St. Leonard Elementary School, Calvert Cliffs State Park, Flag Ponds Nature Park and Camp Bay Breeze.

## Zone 2

Northern boundaries include Route 2 and 4/Governor Run Road; eastern boundaries include Chesapeake Bay/Route 2 and 4/St. Leonard Creek; southern boundaries include Calvert Beach Road and Patuxent River; bordered by Broomes Island Road/Nan Cove to the west.

### Examples of Communities in Zone 2:

Kenwood Beach, Western Shores, Western Shores Estates, Hillside Manor, Chippingwood, Lancaster Hill, Maryland Gardens, Matapeake, Halls Hacienda, Broomes Island, Wallville, Home Place, Forest Glade, Mackall Estates, Ross Woods, Island Creek, Wallville Acres, Nostalgia, Another Place, St. Leonard Shores, Cape Leonard, Summer Solitude Estates, B Division, Old Glory, Oriole Landing, Mackall, August Run and Lost Mill.

### Zone 2 Includes:

Mutual Elementary School, Rock Christian Academy, Jefferson Patterson Park, Calvert Beach Park and Norris Cove Camp.



## Zone 3

Northern boundaries include Breeden Road/Sollers Wharf Road/Old Mill Road/Hellen Creek/St. Paul Branch/Route 497/Calvert Cliffs State Park; bordered by the Chesapeake Bay to the east; bordered by the Patuxent River to the south and west.

### Examples of Communities in Zone 3:

Cove Point Beach, Cove of Calvert, Cove Point, Park Chesapeake Cove Estates, Brianwood, Chesapeake Ranch Estates, Drum Point, Solomons Landing, Solomons, Mill Creek, Harbour Light Beach, River View, Preston Point, Green Hills, Appeal, Hemlock Estates, Trueman Pointe, Cove View, Spruce Hill, Hellen Creek Estates, Hoopers Neck, Spring Cove, Coster, Newtown, Carol Court, Old Hickory, Chesapeake Woods, St. Johns Woods, Olivewoods, Olivet, Dowell, Asbury and Rousby Hall.

### Zone 3 Includes:

Appeal Elementary School, Patuxent Elementary School, Patuxent Head Start, Our Lady Star of the Sea School, Dowell Elementary, Mill Creek Middle School, Patuxent High School Cove Point Park, Southern Community Center and the U.S. Naval Recreation Center at Solomons.

## Zone 4

Bordered by Route 2 and 4 to the north; Broomes Island Road/Nan Cove to the east; the Patuxent River to the south; Route 231/Adelina Road/Sheridan Road to the west.

### Examples of Communities in Zone 4:

Westlake, Woodridge, Barstow, Chapel Hill, German Chapel Woods, Patuxent Woods, Pine Trailer Park, Valley Lee, Bowens, Goodwin, Cypress Knolls, Whispering Woods, Mutual Estates, Mutual, Emerald Cove, Honey Cove Estates, Adelina, Harbor Hills, Long Cove Estates, Williams Wharf Plantation, Williams Wharf, Briscoe, Parkers Wharf, Hellen, Wells Cove, Oakland Hall and Patuxent Reach.

### Zone 4 Includes:

Battle Creek Cypress Swamp Nature Center.

## Zone 5

Bordered by Dares Beach Road/Cassell Road to the north; the Chesapeake Bay to the east; Governor Run Road to the south; Tobacco Ridge Road to Calvert County property gate/Main Street at Monitor Way to Calvert Towne/Route 2 and 4 to the west.

### Examples of Communities in Zone 5:

Chesapeake Heights on the Bay, Dares Beach, Pendleton, Windcliff, Bayfield Farm, Bay Terrace, Hidden Valley, Calvert Towne, Parker Creek Knolls, Scientists Cliffs, Elen Acres, Port Republic, Mountain Laurel Manor and Oak Tree Landing.

## Zone 6

Bordered by the Patuxent River to the north; Hollywood Road/Sotterly Gate Road to the east; Brooks Run to the south; Cat Creek Road/Sandgates Road/Route 235/Clover Hill Road/McIntosh Road/Riva Ridge Drive/McIntosh Run to the west.

### Examples of Communities in Zone 6:

Hollywood, Queen Tree Landing, Sandgates, Riverwood Farms, Hollywood Shores, Winterseat, St. Mary's Beach, Sotterly Manor, Fenwick Manor, Gillens Grove, Land-O-Lakes, Holly Gaf Acres, Drumcliff and Hillville.

### Zone 6 Includes:

St. Mary's Development Center, Three Notch Park, Judge P. H. Dorsey Memorial Park and Sotterly Mansion.

## Zone 7

Bordered by the Patuxent River to the north; Patuxent River Naval Air Station to the east; Brooks Run/Broad Run/Hayden Road/St. Mary's County Airport Drive/Cottonwood Parkway/Wildewood Parkway/Saint Andrews Church Road/Route 235 to the south; Hollywood Road/Sotterly Road to the west.

### Examples of Communities in Zone 7:

California, St. Cuthbert Wharf, Clarks Landing, Scotch Point, Myrtle Point, Mill Cove, Mill Cove Manor, Kingston Manor, Holly Haven, Town Creek, Town Point, Esperanza Farms, Town Creek Manor, Town Creek Farm, Cal Acres, North Town Creek Manor, Woodland Acres, Wildewood, Middle Earth, Red Hill, Peacock Manor, Broad Run and Estates at Joy Chapel.

### Zone 7 Includes:

Hollywood Elementary School, St. John's Elementary School, Town Creek Elementary School, Esperanza Middle School, Green Holly Elementary School, Greenwell State Park, Forest Landing Recreation Area, St. Mary's Industrial Park and Historic Sotterly Plantation.

## Zone 8

Includes all of Taylor's Island, Smithville and residents on Meekins Neck Road, Smithville Road (north of Beaver Dam Creek), and Route 16 (west of Parsons Creek).

# Reception Centers and Mass-Care Centers

If you are asked to evacuate, you should go to the nearest Reception Center. You will be registered at the center. Equipment will be available to check for increased levels of radiation.

## Calvert County

### Reception Center:

- Huntingtown High School  
4125 N. Solomons Island Road  
Huntingtown, MD 20639

### Mass-Care Center:

After registering and monitoring is complete at the Reception Center, Calvert County evacuees who need temporary shelter will be directed to a designated Mass-Care Center.

## Dorchester County

### Reception Center:

- Dorchester Career & Technology Center  
2465 Cambridge Beltway  
Cambridge, MD 21613

### Mass-Care Center:

After registering and monitoring is complete at the Reception Center, Dorchester County evacuees who need temporary shelter will be directed to a designated Mass-Care Center.

## St. Mary's County

Points south of the Calvert Cliffs Nuclear Power Plant proceed to St. Mary's County Reception Center.

### Reception Center:

- Leonardtown High School  
23995 Point Lookout Road  
Leonardtown, MD 20650

### Mass-Care Centers:

After registering and monitoring is complete at the Reception Center, St. Mary's County evacuees who need temporary shelter will be directed to a designated Mass-Care Center.

**Keep listening to your radio or TV for the latest information and instructions.**

**Remain calm. Do not rush**

### **To Learn More About Nuclear Energy**

The Nuclear Energy Institute  
1201 F St., NW, Suite 1100  
Washington, DC 20004-1218  
[www.nei.org](http://www.nei.org)

### **To Learn More About Radiation**

Environmental Protection Agency  
[www.epa.gov](http://www.epa.gov)

### **To Learn More About Constellation Energy Corporation**

Visit Constellation online at [www.constellationenergy.com](http://www.constellationenergy.com) or  
follow us on Twitter at @ConstellationEG

## **Emergency Alert System**

The **Emergency Alert System** will provide you with official information in cases of tornadoes, floods, nuclear plant accidents or other emergencies. Turn on your radio or TV for official information and instructions.

### **Emergency Alert Stations**

#### **AM**

##### **Western Shore:**

WPTX 1690 Lexington Park

##### **Eastern Shore:**

WKHZ 1460 Easton  
WCEM 1240 Cambridge  
WGOP 540 Pocomoke

#### **FM**

##### **Western Shore:**

WKIK 102.9 California  
WPRS 104.1 Waldorf  
WTOP 103.5 Frederick & DC  
WMDM 97.7 Lexington Park  
WSMD 98.3 Mechanicsville  
WRAR 105.5 Tappahannock  
WNNT 107.5 Warsaw

##### **Eastern Shore:**

WCEI 96.7 Easton  
WCEM 106.3 Cambridge

#### **TV**

Comcast Channel 1070  
Calvert County Government  
Channel  
Channel 95  
St. Mary's County  
Government  
Channel 16  
WBOC

# Additional Information

During normal business hours:

## **Calvert County Division of Emergency Management**

175 Main Street  
Prince Frederick, MD 20678  
410.535.1600 ext. 2638  
[www.calvertcountymd.gov/101/em](http://www.calvertcountymd.gov/101/em)

## **St. Mary's County Department of Emergency Services**

23090 Leonard Hall Drive  
P.O. Box 653  
Leonardtown, MD 20650  
301.475.4200 ext. \*2110  
[www.stmarysmd.com/es](http://www.stmarysmd.com/es)

## **Dorchester County Emergency Management Division**

829 Fieldcrest Road  
Cambridge, MD 21613  
410.228.1818  
<https://dorchestercountymd.com/emergency-services-main/>

## **Maryland Department of Emergency Management**

State Emergency Operations Center,  
Camp Fretterd Military Reservation  
5401 Rue Saint Lo Drive  
Reisterstown, MD 21136  
410.517.3600  
<https://mdem.maryland.gov/Pages/default.aspx>

## **Emergency Preparedness Unit**

Calvert Cliffs Nuclear Power Plant  
1650 Calvert Cliffs Parkway  
Lusby, MD 20657

## **Constellation Energy Corporation**

[www.constellationenergy.com](http://www.constellationenergy.com)



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Calvert Cliffs Nuclear Power Plant  
([constellationenergy.com](http://constellationenergy.com))

