



Emergency Planning for the **Byron Area**

**Important Safety Information
for Your Community**

2024/2025

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This brochure provides information on the Byron Generating Station and actions you may be asked to take in the unlikely event of an incident at the station. Please read the entire brochure. Discuss this information with members of your family and then keep the brochure in a convenient place for future use.

What to Do in an Emergency

Monitor and Prepare:

Tune your radio or TV to one of the stations listed in this site. 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 phone numbers broadcast on the radio or TV. If you have a true emergency, call 911.

If Instructed to 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 affected areas 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 special 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 at least three days away from home, locking up and turning appliances off as you would for a 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.

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.

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.

If You Have Livestock

When advised to do so, remove all livestock from pasture, shelter if possible and provide them with stored feed and protected water. If instructed to shelter-in-place and/or evacuation is recommended, efforts to care for livestock should be discontinued in the affected areas and the shelter-in-place and/or evacuation recommendation should be followed.

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.

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

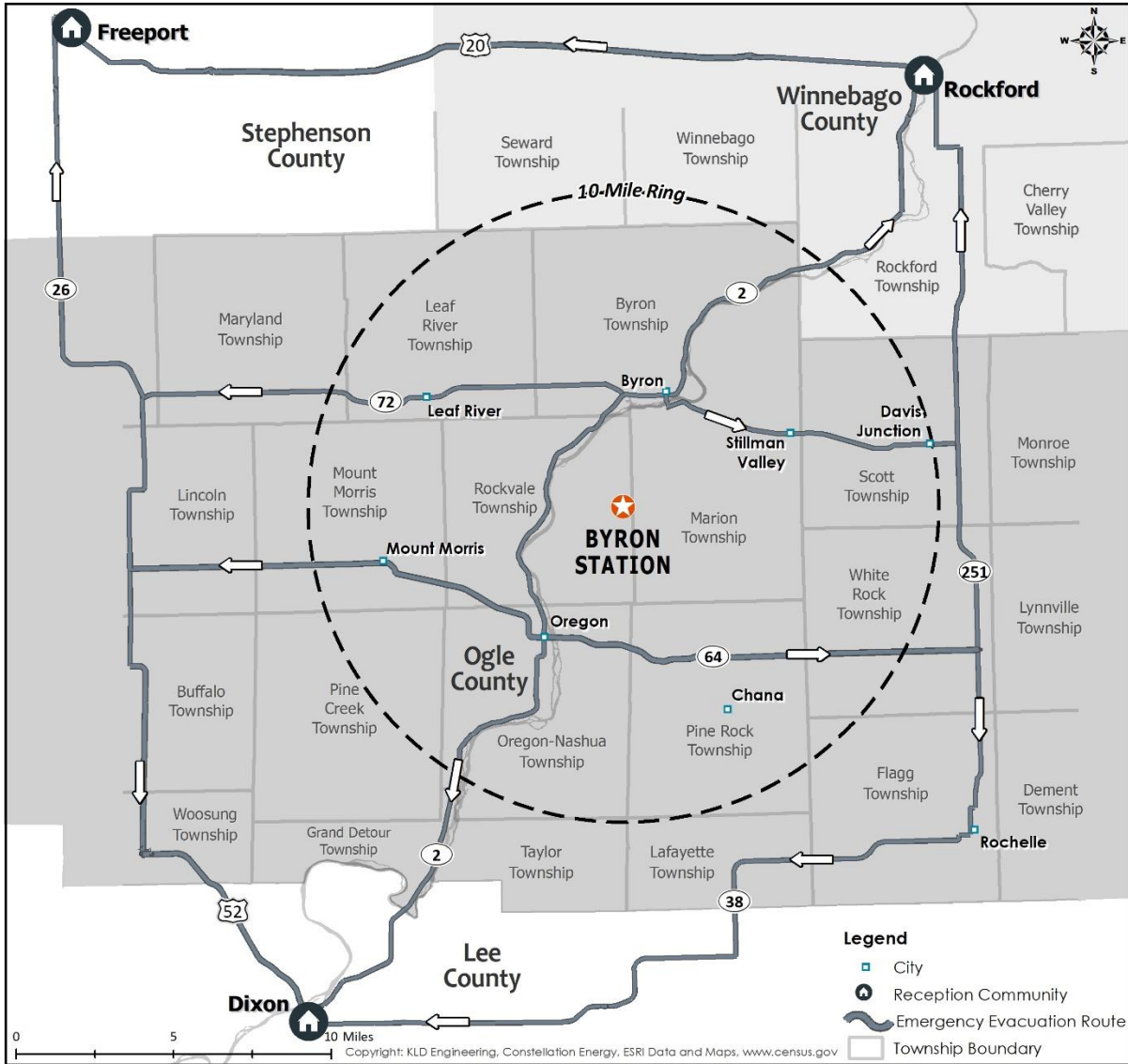
Maintain your vehicle in good running order or go to your closest emergency bus pickup point to get to the identified reception center. If you will need transportation in an emergency, use the attached reply card to notify local authorities now.

Pets

Shelter for evacuated pets will be available. You will receive pet sheltering information when you arrive at the reception center for your area. Only service animals will be permitted inside reception centers or shelters.

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



The Nuclear Regulatory Commission requires specific plans for protecting the public within an approximate 10-mile radius of any nuclear power plant. Know your location on the map and mark it. Some primary evacuation routes are listed below. **In an emergency, follow the directions given on the radio, even if different from those shown below.** Broadcasted directions will be based on actual road and weather conditions and wind direction — helping to ensure your safety as you leave the evacuation area.

Evacuation Routes/Reception Communities

Dixon

- Illinois 2 south
- Illinois 38 west
- Illinois 26 south

Rockford

- Illinois 2 north
- Illinois 251 north

Freeport

- Illinois 72 west to Illinois 26 north
- US 20 west

Nuclear Power and Public Safety

Emergency Planning for the Byron 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. 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 brochure addresses procedures for the Byron area. Please read and keep this material for future reference. Although it specifically addresses a potential nuclear incident, much of the information is useful in any major emergency.

Warning Sirens

Communities across the United States may use outdoor warning sirens for many purposes. Sirens are not exclusive to nuclear power facilities. Sirens may be used to warn the public of many hazards, including fires, flooding, and other events that warrant public notifications. 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 generate a loud, continuous pitch for at least three minutes. In Illinois, sirens are tested on the first Tuesday of each month at 10:00 a.m.

Emergency Broadcasts

Authorities relay emergency information and instructions to the public over local radio and TV stations, including the radio stations listed in this brochure. In an emergency, these stations are your best source of accurate news.

IPAWS

The Integrated Public Alert & Warning System (IPAWS) is FEMA’s national system for local alerting that provides authenticated emergency and life-saving information to the public through mobile phones using Wireless Emergency Alerts, to radio and television via the Emergency Alert System, and on the National Oceanic and Atmospheric Administration’s Weather Radio. Learn more from Integrated Public Alert & Warning System | FEMA.gov.

Shelter-in-place or Evacuation

Officials might recommend that people either take shelter indoors or evacuate an area. It is critically important that you follow the recommended course of action. Staying home when instructed to evacuate or driving around when urged to stay indoors could expose you to unnecessary danger.

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.

For additional information on KI, please see site-specific emergency information for the applicable nuclear plant. Information on the Illinois KI distribution program can be found at **www.illinois.gov/ready**.

Classification of Accidents

There are four accident classifications used to describe nuclear emergencies. We contact federal, state and local authorities in each of the following situations:

- 1. 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.

- 2. 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).

- 3. 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.

- 4. 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.

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

FM 102.3 WYOT

AM 1060, WRHL

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. Fission generates heat that boils water for the steam that runs the turbines, which produce the electricity that we all use.

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.

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 plant is designed to prevent the release of radiation. A serious incident, however, could allow some radiation to escape. This would most likely form 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.

What Are the Real Risks of Nuclear Power?

Sometimes people are concerned a power plant reactor will “blow up,” but this is virtually impossible. The uranium contains only 3 to 4 percent fissionable material, and the fuel is further diluted to slow down the fission process. This low concentration can generate enough heat to boil water — but not enough to explode. In short, there is no way for a power plant reactor to produce a nuclear explosion.

Some people also think they, or the environment, may be accidentally exposed to nuclear radiation by living or being near a nuclear power plant. Although radioactivity can be dangerous, keep in mind a power plant reactor is designed to contain radiation, protecting the rest of the plant and the surrounding community. To ensure the greatest safety, however, any incident at a power plant that presents the slightest potential for a leak will be addressed with the utmost care.

First, special teams would gather detailed radiation readings at the plant and throughout surrounding areas. Depending on a number of factors, including the amount of radiation released and weather conditions that would affect movement of the radioactive “plume,” state officials will recommend a course of action. A significant incident might require people to stay indoors or to evacuate to temporary reception centers. In any event, you will be instructed in a safe course of action to protect yourself and your loved ones.

What Is Radiation?

Radiation is energy in the form of rays or particles. Some atoms (the ones we call radioactive) are unstable. As the unstable atoms go through a natural process called “decay” to become a stable atom, they throw off rays or particles called radiation. This is the same radiation that is produced in nature or medical/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.

Constellation, which operates nuclear power plants in Illinois, works in cooperation with area agencies to inform the public about emergency planning. This brochure addresses procedures for the Byron area. Please read and keep this material for future reference. Although it specifically addresses a potential nuclear incident, much of the information is useful in any emergency.

For More Information on Emergency Planning in Your Area, Please Contact:

Illinois Emergency Management Agency
2200 S. Dirksen Parkway
Springfield, IL 62703
(217) 782-7860
www.illinois.gov/ready

Winnebago County Emergency Services and Disaster Agency
650 W. State Street
Rockford, IL 61102
(815) 319-6015

Ogle County Emergency Management Agency
202 S. First Street
Oregon, IL 61061
Office (815) 562-1001
24 Hour (815) 732-2136

www.nrc.gov/about-nrc/radiation.html
www.nei.org
www.ready.gov
www.hps.org/publicinformation/RadTerms
constellationpublic.info