

Important Information

Please read and keep this guide. It includes **new** and revised information for you that is federally required.



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Monticello Nuclear Generating Plant
Emergency Planning Manager
2807 West County Road 75
Monticello, MN 55362

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Monticello

2016 EMERGENCY PLANNING GUIDE AND CALENDAR • FOR NEIGHBORS OF MONTICELLO NUCLEAR GENERATING PLANT

Monticello

2016 EMERGENCY PLANNING GUIDE AND
CALENDAR FOR NEIGHBORS OF MONTICELLO
NUCLEAR GENERATING PLANT

Important Information

Please read and keep this guide. It is updated annually and includes new and revised information for you that is federally required.

Monticello Nuclear Generating Plant is owned and operated by Northern States Power Company (NSP) – Minnesota, an Xcel Energy Company. This guide is for people who live, work, or go to school within 10 miles of the nuclear generating plant. It provides information about radiation and instructions for what to do in the unlikely event of an incident. Keep it handy so you can find it easily in case of an emergency.

What do you do in case of an emergency?

The best way to be safe in any emergency is to be prepared. Please read and save this information. Follow instructions, stay tuned to your radio and remain calm.

Keep phone lines open

During an area-wide emergency, do NOT call Xcel Energy, local law enforcement or the fire department for information. They need clear phone lines for emergency calls. Instead use the emergency hotline number: **651-297-1304** (metro area) or **1-800-657-3504** (non-metro).

For more information:

Visit our website: www.xcelenergy.com

>> Search for Nuclear Safety

Contact us by email: MNGP_EP_Manager@xenuclear.com

Or write us at:

Monticello Nuclear Generating Plant
Emergency Preparedness Manager
2807 West County Road 75
Monticello, MN 55362

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In the unlikely event of a nuclear generating plant accident, how would you be notified?

If the public needs to take shelter or evacuate, warning sirens will sound. Weather-alert radios will also activate and you will hear a message.

Listen for a steady siren tone lasting three minutes. In areas not served by sirens, slow-moving law enforcement vehicles will warn citizens using sirens and loudspeakers.

Turn on your radio. After the siren sounds, your local station will have instructions. Radio stations listed below will give up-to-the-minute information about what to do and where to go.

Each station is a member of the Emergency Alert System (EAS). This system allows local and state officials to interrupt local programming with emergency information. All stations listed below are on the air 24 hours a day, 7 days a week.

WJON St. Cloud 1240 AM
KRWC Buffalo 1360 AM
WQPM Princeton 1300 AM
WCCO Minneapolis 830 AM
KNOW (MPR) St. Paul 91.1 FM

If a siren is activated for an incident at the nuclear generating plant, an EAS message will be broadcast immediately by local stations.

Siren tests are conducted the first Wednesday of each month at 1 p.m. If you have concerns that a siren did not sound when it should have, or has somehow malfunctioned, please call your local emergency manager. Numbers are listed in this guide.

In addition to the monthly first Wednesday siren test, the sirens will be periodically tested to ensure maximum siren availability. During these tests, you may hear sirens activate for 10-15 seconds. This short activation is part of maintenance testing. These brief tests will typically be done on Wednesdays but may also be performed at other times such as well after a severe storm has passed to check for any damage to the sirens.

Remember, a siren alert signal will last for a full three minutes, and maintenance testing may last from 10-15 seconds.

WHEN YOU HEAR A SIREN, LOUDSPEAKER OR WEATHER-ALERT RADIO WARNING, GO INDOORS, TUNE TO A LOCAL RADIO OR LOCAL TV STATION LISTED. PLEASE DO NOT CALL LAW ENFORCEMENT AUTHORITIES. CHECK IN WITH YOUR NEIGHBORS TO ENSURE THEY HEARD AND UNDERSTOOD THE WARNING MESSAGE.

Emergency Notification Systems

The Wright and Sherburne County Notification Systems are a high volume-high speed communications service available for mass emergency notifications. Residents and businesses are able to add or update their contact information to ensure they will be included when a message is sent for all hazards notifications, to include the unlikely event of a nuclear power plant incident. The system allows for unlisted numbers, mobile numbers, and TDD/TTY requirements to be loaded.

For Wright County residents, you can have your information added into the system by going to the following website:
<https://public.coderedweb.com/CNE/D25233D8BD38>

For Sherburne County residents, you can have your information added into the system by going to the following website:
<https://public.coderedweb.com/CNE/BF02864DCC54>

Evacuate

What exactly should you do if asked to evacuate?

If you are asked to evacuate, follow instructions promptly. Don't panic. You will have time to pack a few personal items and secure your home as if you were going on vacation, unless radio instructions tell you otherwise.

All normal traffic laws will be maintained. Your local law enforcement agency will assist with evacuation.

Once you hear the evacuation order over the radio or television, follow the instructions given by local and state authorities.

- Close all doors and windows. Pack a few personal items and prepare your home as if you were leaving on vacation.
- Position the **"NOTIFIED"** sign found in the back of this brochure to an easily seen front window, door or mailbox so authorities will know you have evacuated.
- Assist neighbors, if possible, if they need transportation out of the area.
- Follow radio instructions to evacuate to the emergency reception center.
- See the evacuation route map for directions to the reception center.
- Drive the most direct route to proceed to the reception center.
- While evacuating during a General Emergency, the most serious category of event, you will be directed to take potassium iodide (KI). Do not delay your evacuation to locate or administer KI.

If you have to evacuate, what should you take along?

Take the following items:

- Prescription medicines
- Baby formula and diapers
- Cash, credit cards and checkbook
- Two changes of clothing per person
- Portable radio and flashlight, both with working batteries
- First-aid kit
- Potassium Iodide (KI)
- Pillows, sleeping bags and personal hygiene items
- Household pets, cages and supplies (food)
- For information about sheltering of exhibition or other large animals (such as horses), please refer to page 9.
- Wet cloths or towels

If instructed to evacuate, check before you leave:

- Shut windows and close blinds and draperies.
- Prepare your home as if you were going on a vacation.
- Check your home for security – lock doors, windows, etc.
- Position the **"NOTIFIED"** sign found in the back of this brochure in an easily seen front window or door or tie something white on the front door of your home or your mailbox.
- Assist elderly or immobile neighbors, if possible, with evacuation.
- Place pet in a portable cage and evacuate with family.

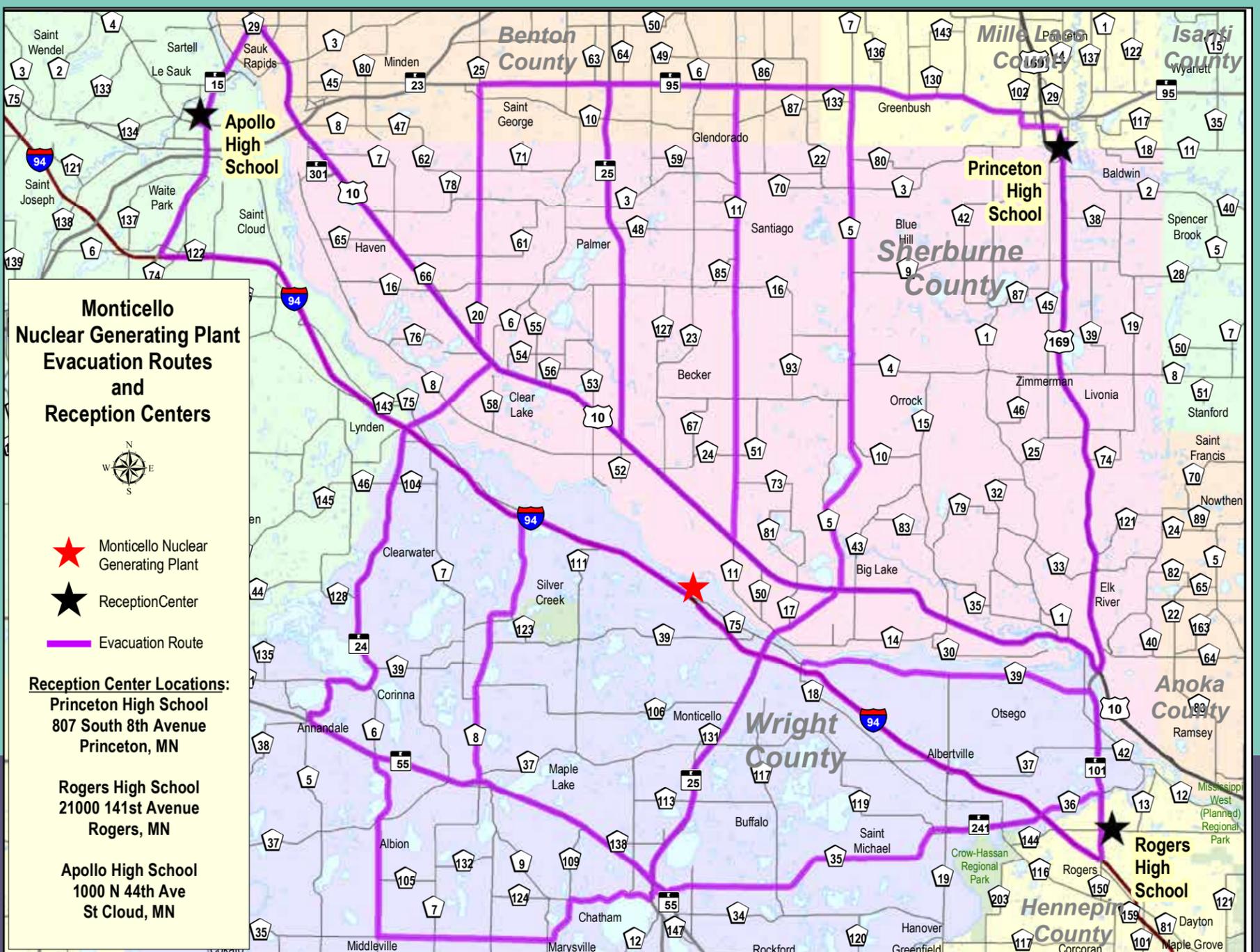
What happens at the reception center?

People arriving at the reception center will be registered and monitored for radiological contamination. The reception center will also monitor vehicles and household pets for contamination. If contamination is detected, specially-trained personnel will provide decontamination. Medical services will also be available. Potassium iodide (KI) is not provided at the reception center (see KI section on page 8).

Where can you stay after evacuating?

After registering at the emergency reception center:

- You can stay with a friend or relative outside of the affected area.
- You can stay at an American Red Cross shelter (congregate care center).



What if children are in school during evacuation?

School children may be evacuated during a Site Area Emergency or a General Emergency. In the case of evacuation, children and teachers in school will be taken directly to a school outside the 10-mile Emergency Planning Zone (EPZ), called a sister school.

At the sister schools, children will be fed, sheltered and supervised until parents come for them. Public information announcements will tell parents where the sister schools are located. Please do not disrupt evacuation procedures by going to your child’s school.

Be sure your children understand evacuation procedures and know you will meet them at the sister school location.

Children attending the following schools in the Monticello area will be bused to their sister school, Maple Grove Senior High School, located at 9800 Fernbrook Lane in Maple Grove:

- Alternative Learning Program
- Eastview Elementary
- Faith Christian
- Little Mountain Elementary
- Monticello High School
- Monticello Middle School
- Prairie House
- Pinewood Elementary
- Swan River Montessori

Children attending the following schools in the Becker School District will be bused to their sister school, Zimmerman Middle and High School located at 25900 4th Street West in Zimmerman:

- Becker High School
- Becker Intermediate School
- Becker Middle School
- Becker Primary School

Children attending the following schools in the Maple Lake area will be bused to their sister school, Dassel-Cokato Middle and High School, located at 4852 Reardon Avenue SW in Cokato:

- Maple Lake Elementary School
- Maple Lake High School
- St. Timothy’s School
- Westside School

Children attending the following schools in the Big Lake area will be bused to their sister school, Princeton Middle School, located at 1100 4th Avenue North in Princeton:

- Big Lake Middle School
- Heritage Montessori of Big Lake
- Independence Elementary School
- Liberty Elementary School

Children attending the following school in the Big Lake School District will be bused to their sister school, Princeton North Elementary, located at 1202 7th Avenue North in Princeton:

- Big Lake High School

Children attending the following schools in the Buffalo area will be bused to their sister school, Rockford Community Center, attached to Rockford Elementary, located at 7650 County Road 50 in Rockford:

- Buffalo High School
- Phoenix Learning Center

Children attending the following schools in the Buffalo area will be bused to their sister school, Rockford High School, located at 7600 County Road 50 in Rockford:

- Buffalo Community Middle School
- Cornerstone School
- Wright Technical Center

Children attending the following elementary schools in the Buffalo area will be bused to their sister school, Rockford Elementary School, located at 7650 County Road 50 in Rockford:

- Discovery Elementary School
- Northwinds Elementary
- Parkside Elementary School
- PRIDE Transitions
- St. Francis Parochial School
- Tatanka Elementary School

Children attending the following school in the St. Michael-Albertville School District will be bused to their sister school, Big Woods Elementary School, located at 13470 Frankfort Parkway NE in St. Michael:

- Fieldstone Elementary School

Children attending the following schools in the St. Michael-Albertville School District will be bused to the St. Michael-Albertville Middle School located at 4862 Naber Avenue NE in St. Michael, MN:

- St. Michael-Albertville High School

Children attending the Kaleidoscope Charter School in Otsego will be bused to their sister school, St. Michael Elementary School, located at 101 Central Ave. W., St. Michael, MN.

What if children live within the 10-mile EPZ, but attend school outside the 10-mile EPZ?

Children who live within the 10-mile Emergency Planning Zone, but attend school outside of the 10-mile EPZ, will not be bused home during an emergency. Parents should pick them up at their current school.

What about evacuating the elderly, physically challenged, hearing impaired or blind?

Local emergency management officials will help people unable to evacuate on their own. If you know someone who is elderly, hearing-impaired, blind or physically challenged, or someone without a car, or if you need help, **fill out and send in the enclosed registration card.**

Don’t wait for an emergency to ask for help. Xcel Energy will forward the card to local authorities. This information will remain confidential in keeping with the Minnesota data privacy requirements. Local emergency officials will put you on a list to make sure you get help during an evacuation. For more information, please call your area emergency management. Phone numbers can be located on page 18.

Will financial losses by the public be reimbursed?

Efforts will be made to establish an insurance claims office within 48 hours after declaration of a General Emergency. Area residents and property owners will be eligible for reasonable emergency-related expenses that result directly from the nuclear accident for an authorized evacuation or shelter-in-place. Reimbursements will be made for immediate and reasonable out-of-pocket living expenses, such as food, lodging, transportation (mileage), lost wages and emergency medical treatment. There also will be coverage for bodily injury and property damage. Media announcements will give locations of insurance claims offices.

What about evacuating other institutionalized individuals?

Institutionalized individuals including hospital patients, nursing home residents, and persons subject to judicial restraint will be evacuated from their facilities in accordance with each entity’s emergency plans.

How will you know when you can return to your home or farm?

Public officials will tell you when it is safe to return to your home or farm. You will get instructions explaining how long you can remain, routes to travel, safety precautions and ways to remove contamination from your property, if necessary.

Specific instructions will depend on weather conditions and the distance of your home, farm, or facility from the commercial nuclear generating plant.



Shelter-in-Place

What exactly should you do if told to take shelter?

- Go indoors and stay inside.
- Close all outside doors and windows.
- When requested turn off all air conditioning, furnaces, fireplaces or ventilating devices that might draw in outside air. Use electrical sources for alternative heating as needed.
- If possible, go to the basement and take a radio with you.
- Listen to your radio or television for further instructions. Radio and television reports will provide the status of the emergency.
- Do not leave your shelter or evacuate unless told to do so.
- Keep family and pets inside.
- If you must go outside to warn a friend or family member, limit your time to an hour or less. Cover your mouth and nose with a wet cloth while you are outside. If you must go outside and are exposed to a radioactive release, go inside, remove your clothing, place it in a plastic bag, and take a shower.

- Do not eat any outdoor food such as wildlife, wild edibles (plants, fruit, berries, mushrooms and seeds), poultry, eggs, dairy products or garden produce until instructed by authorities.
- While sheltering, prepare evacuation items for you and your pet(s).
- For information about sheltering of exhibition or other large animals (such as horses), please refer to page 9.
- During a General Emergency while sheltering, you will be directed to take potassium iodide.

What about Sheltering-in-Place for the elderly, physically challenged, hearing impaired or blind?

If you know someone who is elderly, hearing-impaired, blind or physically challenged, or if you need help, **fill out and send in the enclosed registration card.**

Contact the emergency numbers and hotlines listed on page 18.



Using Potassium Iodide (KI)

How can potassium iodide (KI) protect me and my family, and how do I obtain it?

Potassium iodide, known by its chemical symbol KI, is an over-the-counter medication. In the unlikely event of a serious nuclear plant emergency, KI is a supplemental protective action to evacuation and sheltering-in-place. It reduces the risk of thyroid cancer from exposure to radioactive iodine. Radioactive iodine could be among the materials released in a severe emergency.

KI protects only the thyroid gland from exposure to radioactive iodine. It does not protect any other part of your body, and it does not provide protection from other forms of radiation.

The State of Minnesota is making potassium iodide (KI) tablets available free of charge to every household, school, daycare facility and place of business within the 10-mile emergency planning zone around both nuclear generating plants in Minnesota.

To obtain KI simply complete the appropriate attached voucher at the back of this brochure and take it to the pharmacy at a participating Target Store listed on the voucher pages. This is a KI pre-distribution program and is only available during non-emergency times. Should an emergency occur at the Alert level or higher, KI distribution at the participating pharmacies will be stopped.

Parents with children in daycares must complete an authorization form for KI to be administered to their children in the event of a nuclear emergency. Contact your dependent care provider for information about KI authorization.

Each school district within the 10-mile EPZ has decided to stockpile KI onsite. Check with your school administration or nurse to ensure that you have completed the necessary medical consent forms for your child(ren) so KI can be administered in the unlikely event of an incident at the nuclear generating plant.

When do I take potassium iodide (KI) and in what dose?

During a General Emergency declaration at a nuclear generating plant, the State of Minnesota will alert people within the affected area of the 10-mile EPZ to evacuate or shelter-in-place AND take KI.

Information will be given about self-administering KI in accordance with FDA approved dosage guidelines, which were provided by the manufacturer with the doses. General guidelines are:

- Adults, women who are breastfeeding and children who are adult size (greater than or equal to 150 pounds) should take 130 mg (two 65 mg tablets).
- Children between 3 and 18 years of age should take 65 mg.
- Infants and children between 1 month and 3 years of age should take 32 mg (1/2 of a 65 mg tablet). This dose is for both nursing and non-nursing infants and children.
- Newborns from birth to 1 month of age should be given 16 mg (1/4 of a 65 mg tablet). This dose is for both nursing and non-nursing newborn infants.

Evacuation is the primary protective action in the event of an emergency. People within the EPZ who have the capability of evacuating should follow the evacuation instructions. Residents should not delay evacuation in order to locate their supply of KI.

A recommendation to take KI will be issued if the plant declares a General Emergency. That recommendation will be communicated through media releases and advisories, the Emergency Alert System (EAS), radio and television stations.

For **Additional Information** on the health effects of KI, call the Minnesota Department of Health at **651-201-4400**. For distribution questions, contact the Department of Public Safety Division of Homeland Security and Emergency Management at **651-201-7400** or the website: **hsem.dps.mn.gov**.

****Please note that if you already have obtained KI in the past it may have expired in July 2015. To replace your KI supply please complete the appropriate voucher provided in the back of this brochure and take it to the pharmacy at participating Target Store.****

WARNING: PEOPLE SHOULD NOT TAKE KI IF THEY ARE ALLERGIC TO IODINE, HAVE DERMATITIS HERPETIFORMIS OR HYPOCOMPLEMENTEMIC VASCULITIS, OR HAVE NODULAR THYROID DISEASE WITH HEART DISEASE. CONSULT WITH YOUR PHYSICIAN IF YOU HAVE FURTHER QUESTIONS OR CONCERNS.

Actions for Farmers, Food Processors and Distributors in Case of a Nuclear Generating Plant Accident

Protective Actions:

Livestock

Remove livestock from pasture, shelter them in an enclosed facility, and limit the entry of outside air and water from rain or surface water. Provide feed and water from protected sources. If you cannot shelter them completely, use a shelter that provides as much protection as possible from outside air and rainwater or surface water.

If livestock inhale contaminated air, or consume contaminated water or feed, the contaminants could enter the human food supply through milk or dairy products. Do not drink fresh milk or consume any dairy products from cows or goats until laboratory results are available. Government officials may come to your farm to take milk, feed and water samples for laboratory analysis.

If dairy products are found to be contaminated, state or local officials will recommend specific actions based on the type and amount of contamination.

Food Processors and Distributors

Government officials may restrict the movement of food products and withhold them from the marketplace until sampling analysis is completed. Officials may instruct you to hold raw food products for sampling before processing. Officials will issue instructions on the safe handling and disposition of contaminated food products.

The local Emergency Management Office, Extension Service, State Department of Agriculture, Farm Service Agency (FSA), and state and local health departments will work with farmers and farm organizations to determine whether products are safe for marketing.

Exhibition or Other Large Animals

Remove exhibition or other large animals (such as horses) from pasture area. Shelter the animals in an enclosed facility, limiting exposure to outside air and water. Provide feed and water from protected sources. If the animals cannot be completely sheltered, provide as much protection as possible from outside air and rainwater or surface water.

For more information about evacuation and sheltering of exhibition or other large animals as well as household pets, contact the Department of Public Safety Division of Homeland Security and Emergency Management at 651-201-7436 or the website: hsem.dps.mn.gov.

Poultry and Poultry Products

Poultry raised indoors and given protected feed and water are not likely to be contaminated. For poultry raised outdoors, state and local officials will advise what actions to take.

Fish and Wildlife

State and local officials will monitor fish (in lakes, rivers, ponds, and hatcheries) and wildlife to determine if they can continue to be harvested. Fish and wildlife samples will be collected and analyzed. Recommendations will be made based on the sampling results.

Water

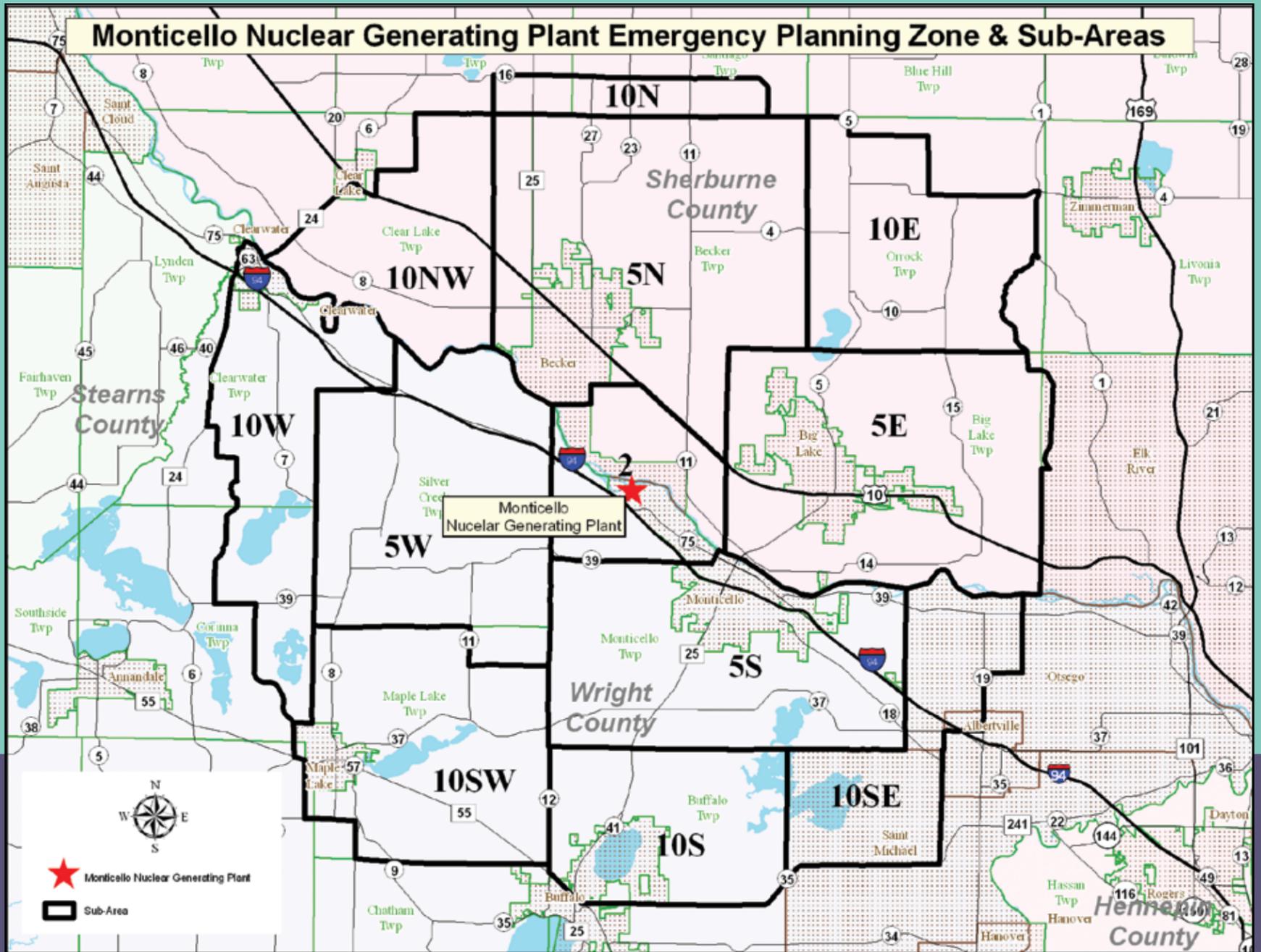
Protect open water sources. Cover rain barrels and tanks. Covered wells and other covered underground water sources require no protective actions. Disconnect fill pipes from storage containers supplied by surface runoff.

Commodity and Specialty Crops (i.e., soils, grains, honey, berries, etc.)

Most contamination on standing crops can be removed by wind and rain. Don't move or harvest commodity or specialty crops. These will be tested to determine if there is contamination. Recommendations will be made based on the testing results.

For more information, read the booklet **"Radiological Emergency Information for Farmers, Food Processors, and Distributors"** for Minnesota residents. Your agricultural extension service office can provide copies if you would like one. Contact numbers can be found on page 18.





How wide an area would be affected?

A nuclear generating plant emergency could affect an area varying from the immediate plant site itself to many square miles around the plant. The hazard would be from radioactive gases or radioactive materials the wind could carry from the plant.

The map above shows the 10-mile Emergency Planning Zone (EPZ) around the Monticello Nuclear Generating Plant. The EPZ is divided into subareas based on familiar landmarks such as highways, roads, rural townships, etc. In the unlikely event of an accident involving radioactive releases from the plant, EAS radio and television stations will describe the areas where residents should take action to evacuate or shelter-in-place.

Monticello Individual Sub-Area Descriptions

- 2 People north of County Road 39 (Golf Course Road) and west of Elm Street in Monticello and Monticello Township in Wright County.

People West of County Road 50 and south of US Highway 10, 137th Street Southeast and 140th Avenue (Sherburne Avenue) in the southern portion of Becker and Becker Township in Sherburne County.
- 5N People in Becker and Becker Township in Sherburne County.
- 5E People in Big Lake and Big Lake Township in Sherburne County.
- 5S People north of County Road 106 (80th & 90th Streets) in the entire city of Monticello and all of Monticello Township in Wright County.
- 5W People in Silver Creek Township and the northeast corner of Maple Lake Township in Wright County. This does include Lake Maria State Park.
- 10N People south of County Road 16 (57th Street Southeast) and west of Hwy 48 in Santiago Township in Sherburne County.

People east of County Road 53 and south of County Road 16 (57th Street Southeast) in Palmer Township in Sherburne County.

- 10E People in the city of Orrock in Sherburne County. This area includes the Sand Dunes Game Refuge.
- 10SE People west of County Road 19 in Otsego and Otsego Township in Wright County.

People west of County Road 19 and north of County Road 35 in St. Michael Township. This does not include downtown St. Michael or downtown Albertville.
- 10S People north of Hwy 55, north of County Road 35, and west of Pelican Lake in the city of Buffalo and Buffalo Township, in Wright County.
- 10SW People in Maple Lake Township and the city of Maple Lake in Wright County.
- 10W People south of the Mississippi River, west of Elder Road, west of Gowan Ave NW, and east of Hwy 24, Ireland road and Illsley road in Clearwater Township and the city of Clearwater in Wright County.

People east of Ireland road and 91st street, east of Hwy 7 (south of County 39) and west of Gowan Ave NW in Corrina Township in Wright County.
- 10NW People south and east of State Highway 24 and the Clear Lake city limits in Clear Lake Township in Sherburne County. This area DOES NOT INCLUDE the city of Clear Lake.

Emergency Planning Zones

Two types of planning zones may be referred to in an emergency:

Emergency Planning Zone (EPZ) is the area within a 10-mile radius around the nuclear generating plant in which people may be directly exposed to radiation.

Ingestion Pathway Zone (IPZ) is the area within a 50-mile radius around the nuclear generating plant in which people may be indirectly exposed to radiation by eating or drinking contaminated food, milk and water.

Emergency Planning and Emergency Classification Levels

Why do we need emergency plans?

If a serious accident were to occur, plant staff and local and state officials need to follow an established and tested plan to get information quickly to the public. The plan includes local and state officials, emergency management officials, law enforcement authorities and local radio and television stations.

What will plant staff and state officials do during an emergency?

During an emergency, nuclear plant staff will work to shut down the plant to prevent, or minimize, any release of radioactivity. Xcel Energy will immediately inform state and county officials about the emergency.

Both Xcel Energy and state personnel will monitor radiation levels. State emergency management and health departments will assess the situation and give radio and television stations emergency instructions for the public.

People might be advised no danger exists or that they should shelter-in-place or evacuate. The local sheriff could order an evacuation earlier if there is an immediate threat to public health and safety.

Are there different levels of emergency?

Yes, four emergency classification levels are used by offsite response organizations and all nuclear generating plants in the U.S. The classifications address issues such as rising river levels to an emergency involving residents around the plant site. The four classifications are **Notification of Unusual Event, Alert, Site Area Emergency and General Emergency**, the latter being the highest level. A brief description of each emergency classification level is on this page.

If emergency action is needed, plant neighbors will be notified immediately. The county warning sirens will sound to warn you to tune to local EAS radio or television stations.

There are other post-sheltering/evacuation phases of a nuclear plant emergency:

Re-entry is an approved, temporary entry inside a Restricted Zone for essential purpose. There activities may include:

- Protection of valuable infrastructure
- Law enforcement
- Fire fighting
- Tending livestock and exhibition animals
- Control of industrial processes and public utilities
- Animal rescue/control

Relocation is the removal or continued exclusion of people (households) from contaminated areas to avoid long-term exposure to low-level radiation.

- The initial post-plume priority will be to examine areas that have not been evacuated, determining whether contamination levels necessitate relocation.
- The next priority will be to survey contamination levels in evacuated areas, gauging the possibility and timeline for safe return to areas where safe reoccupation can occur.

Restricted Zones are established to protect people from chronic exposure to low-level radiation. Access must be controlled to these areas where the population has been evacuated or relocated.

Access is controlled to these areas in order to protect the public in contaminated areas, preventing long-term exposure to radiation. The EPA Protective Action Guidelines (PAGs) are used to establish threshold radiation levels for this decision:

First year exposure: 2 rem or higher total effective dose equivalent (TEDE—the whole body internal and external dose).

Any single year following the first year: 0.5 rem TEDE or higher

Cumulative dose over 50 years: 5 rem TEDE or greater

Areas where these contamination levels are exceeded must be designated as Restricted Zones until a combination of remediation efforts and natural radioactive decay allow for safe long-term residency. Radiation monitoring will be ongoing in any area declared a Restricted Zone.

Return is the reoccupation of areas for unrestricted residence, or resumed use, by previously evacuated or relocated populations and businesses.

Recovery is the end goal following an accident at a nuclear generating plant when life, access and commerce return to pre-incident conditions.

Emergency Classification Level descriptions:

Notification of Unusual Event – A low level event which poses no threat to public safety but which warrants an increased awareness on the part of plant and off-site agency personnel.

Alert – Also a low level condition which poses no threat to public safety, but precautionary mobilization of certain response functions is appropriate in case conditions degrade.

Site Area Emergency – At this level, conditions have degraded to a point warranting the full activation of response functions. Precautionary protective actions for high risk portions of the general public might be recommended.

General Emergency – Conditions have degraded to a point threatening public safety and some form of protective actions will be initiated.

Information on Nuclear Generating Plants and Radiation

How does a nuclear generating plant create energy?

Nuclear generating plants produce electricity much the same way as fossil-fuel generating plants. Both create steam to spin a turbine and drive an electric generator. The major difference is nuclear power's method of making heat. At nuclear plants, a nuclear reactor takes the place of a combustion boiler. The heat that produces steam comes from energy released during fissioning (splitting the atoms) of uranium fuel, rather than from burning a fossil fuel, such as coal. A controlled nuclear chain reaction takes place in the reactor as neutrons from one splitting atom strike other atoms, causing them to split and release heat energy. Control rods regulate the chain reaction.

What kinds of protection does a nuclear power plant offer?

A series of barriers and safety systems within the plant keeps radioactivity inside during normal operations. The building that contains radioactive fuel and the reactor has 3 1/2 foot-thick concrete and steel walls and thick concrete and steel flooring. The concrete building and steel containment lining act as a barrier. It surrounds the reactor and other equipment in contact with highly radioactive materials. The containment structure extends well below the ground. The reactor vessel, where fission takes place, is a thick steel cylinder that contains the fuel assemblies.

All nuclear plants, including Monticello and Prairie Island, are conservatively designed and built with many safety systems and emergency back-ups. Commercial nuclear plants are among the most formidable structures in existence. A 2002 study using computer modeling by internationally recognized experts found the structures which house nuclear reactor fuel would protect against a release of radiation even if struck by a large commercial jetliner.

How likely is an emergency?

The chances of a serious nuclear plant emergency are remote compared with the chances of a hazardous chemical spill or a natural disaster, such as a tornado or flood.

U.S. nuclear generating plants have had a remarkable safety record during the last 30 years. No member of the public has been harmed physically as a result of an accident, and it is unlikely that Xcel Energy's Monticello or Prairie Island plants will change that record.

Can a nuclear plant blow up like a bomb?

No. A nuclear plant cannot explode like a bomb. Nuclear plants do not have enough of the right concentration of radioactive material to produce a nuclear explosion.

What is radiation?

Radiation is energy emitted in tiny waves or particles. You can't see, hear or taste radiation.

For these reasons, people sometimes think radiation is mysterious or frightening. We know a great deal about it. Heat, light and radio waves are kinds of radiation. Rocks, trees and even you have some radioactive atoms.

The atom, the basic building block of the universe, is the universal source of radiation. All things are made of atoms.

All atoms are made of even smaller particles: protons, electrons and neutrons. These particles are joined tightly together. Any time this bond is broken, energy is released. This energy is called radiation.

Radiation sometimes produces charged particles in material it strikes. Charged particles are known as ions. Ionizing radiation is the type of radiation we are discussing in this guide. Ionizing radiation can produce charged particles in all matter.

Xcel Energy nuclear operations

Xcel Energy operates two nuclear plants in Minnesota, the Monticello plant near Monticello, and the Prairie Island Plant near Red Wing. Together, the two plants deliver nearly 30 percent of the electricity used by Xcel Energy customers in the Upper Midwest. Nuclear is key to the company's ability to deliver our customers in the region nearly 50 percent of its electricity with no carbon dioxide emissions.

The Monticello Nuclear Generating Plant is comprised of a boiling water reactor capable of generating 671 megawatts, enough to power about 500,000 homes. The plant, which began commercial operation in 1971, was relicensed by the Nuclear Regulatory Commission in 2006 for an additional 20 years to 2030.

What does ionizing radiation do to the human body?

A small amount of radiation entering the body might occasionally create cell damage, which the body can repair as it would any other cell damage.

Because of aging or disease, body cell-repair goes on all the time. But a very large dose of radiation will damage large numbers of the body’s cells faster than the body can repair them or produce new cells.

What about radiological contamination?

An area contaminated by radioactive materials after a radiological accident might present a long-term problem. The longer these materials remain in the soil, the more likely plants will absorb them. Then contaminated vegetables, fruit, grains and forage might enter the food chain of animals and people.

If there is any possibility your land is (or could become) contaminated, State and Federal emergency officials will test it and recommend long-term protective actions.

You can get more information from:

- State, tribal, county or local emergency management offices
- State Department of Health
- State Department of Agriculture
- Agricultural Extension Agents
- Farm Service Agency (FSA)
- Contact numbers on page 18.

How concerned should you be about radiation?

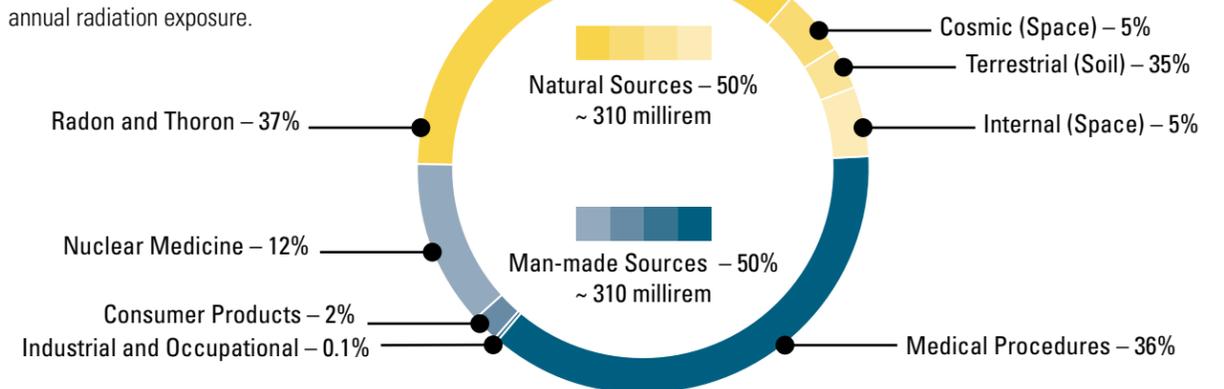
Government regulations limit the radiation dose the public can receive from nuclear generating plant-related operations to no more than 100 millirem a year above natural background levels. Xcel Energy nuclear generating plants have never approached the 100 millirem limit.

To put millirem into perspective, let’s look at a chart that shows sources and amounts of background and man-made radiation we live with every day. Commercial nuclear power plants are an extremely small source of public radiation as demonstrated in the graphic below.

How much average background radiation does the average citizen get?

On average, each of us receives about 310 millirem of radiation a year from natural background radiation sources, such as the earth and sky, and an additional 310 millirem from man-made sources.

The largest man-made source of exposure is medical procedures, such as x-rays and computed tomography (CT) scans. Consumer products such as tobacco, fertilizer, welding rods, exit signs, luminous watch dials and smoke detectors account for about 10 millirem to our annual radiation exposure.



Source: U.S. Nuclear Regulatory Commission fact sheet on biological effects of radiation www.nrc.gov

No adverse health effects have been discerned arising from these levels of radiation exposure.

The pie chart shows a breakdown of radiation sources that contribute to the average annual U.S. radiation dose of 620 millirem.

Above background levels of radiation exposure, the Nuclear Regulatory Commission (NRC) requires that its licensees limit maximum radiation exposure to individual members of the public to 100 mrem per year, and limit occupational radiation exposure to adults working with radioactive material to 5,000 mrem per year. NRC regulations and radiation exposure limits are contained in Title 10 of the Code of Federal Regulations, Part 20.

Source: US Nuclear Regulatory Commission Fact Sheet on Biological Effects of Radiation found at: www.nrc.gov/reading-rm/doc-collections/fact-sheets/bio-effects-radiation.htm

Summary

Are you prepared for any emergency?

Knowing what to do ahead of time helps you and your family be prepared for ANY emergency. **Save this guide and keep it in a convenient place.**

If you are hearing-impaired or physically challenged, be sure to sign up for assistance by filling out the enclosed card and sending it to Xcel Energy.

Make sure all members of your family understand emergency plans and evacuation routes. Talk it over with your neighbors and friends. Some of them might need your help, or you might need theirs.

Be sure your children in school and day care centers understand evacuation procedures and know that you will meet them at the designated emergency center or sister school.

Use this checklist to be sure you are prepared.

Do you have these items?

- Prescription medicines
- Baby formula and diapers
- Cash, credit cards and checkbook
- Two changes of clothing per person
- Portable radio and flashlight, both with working batteries
- First-aid kit
- Potassium Iodide (KI)
- Pillows, sleeping bags and personal hygiene items
- Household pets, cages and supplies (food)
- Cloths or towels that can be wetted

If you hear the sirens:

- Go indoors.
- Turn on the radio or television and stay tuned to an EAS station for official information.
- Keep phone lines open; use only if absolutely necessary.
- Follow instructions and stay calm.
- Bring your pets indoors.

If instructed to take shelter:

- Do not evacuate your home; stay inside.
- Do not eat any outdoor food such as wildlife, wild edibles (plants, fruit, berries, mushrooms and seeds), poultry, eggs, dairy products or garden produce until instructed by authorities.
- Close all doors and windows.
- When requested turn off air conditioners, furnaces, fireplaces, ventilation fans and other air intakes. Use electrical sources for alternative heating.
- If possible, go to the basement and take a radio with you.
- While sheltering, prepare evacuation items for you and your pets.

If instructed to evacuate, check before you leave:

- Shut windows and close blinds and draperies.
- Prepare your home as if you were going on a vacation.
- Check your home for security – lock doors, windows, etc.
- Position the **“NOTIFIED”** sign found in the back of this brochure in an easily seen front window or door or tie something white on the front door of your home or your mailbox.
- Assist elderly or immobile neighbors, if possible, with evacuation.
- Place house pet in portable cage and evacuate with family.

Personal Planning Guide

Fill in these blanks now and go over this information with your family. Decide who would pick up school-age children at the host facility and where to meet if you were apart in an emergency. Be sure children know what to do if they are alone and sirens sound. Talk to your neighbors so you can help each other if necessary.

It is a good idea to keep some things handy in case of an emergency: portable radio, flashlight and extra batteries. Keep your car in good running order and don't let the gas tank get too low.

This will save time and avoid confusion in an emergency.

My best evacuation route is: _____

My reception center is located at: _____

My school-age children will be taken to: _____

Prescription medications I will need: _____

Important papers I will need: _____

My local Emergency Management Office non-emergency number during regular business hours is: _____

My local Emergency Management Office emergency number is: _____

Pet-friendly hotels/motels: _____

Boarding facilities outside of my area: _____

Other things to remember: _____

For information during an emergency, Minnesota residents should call:

Minnesota Emergency Operations Center Hotline:
Outside the Twins Cities Metropolitan Areas 1-800-657-3504
Twin Cities Metropolitan Areas 651-297-1304

For information NOT during an emergency, you should call these numbers:

Wright County
Nuclear Preparedness Director 763-682-7326
Extension Service Office 763-682-7394

Sherburne County
Emergency Services Office 763-765-3500
Extension Service Office 763-241-2720

**Homeland Security and
Emergency Management Radiological Preparedness**
651-201-7490
hsem.rep@state.mn.us

