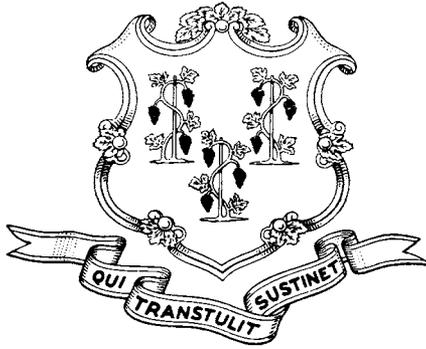


Radiological Emergency Information for Connecticut's Agricultural Community



Millstone Power Station



**The Honorable Governor,
State of Connecticut**

**Commissioner,
Department of Agriculture
(DoAg)**

**Commissioner,
Department of Emergency Services and
Public Protection**

**Division of Emergency Management and
Homeland Security**

Radiological Emergency Preparedness

(DESPP DEMHS REP)

**Radiological Emergency
Information
For
Connecticut's Agricultural
Community**

Revised 2021

Purpose

The purpose of this booklet is to provide information to farmers, live-stock owners, fruit and vegetable growers, food processors/distributors and other agricultural interests about protective actions that they may need to take if a radiological emergency occurs at a nuclear power plant within Connecticut or a neighboring state.

The State of Connecticut, working with Dominion Energy/ Millstone Nuclear Power Station and federal agencies, has developed emergency response plans to inform and support the farm and agricultural community in the event of a nuclear power plant emergency. This booklet contains information on how you would be notified and what protective actions you could be asked to follow.

For more information about state plans and emergency resources, please contact:

Connecticut Department of Agriculture
450 Columbus Blvd., Suite 701
Hartford, CT 06103
860-713-2500
<https://portal.ct.gov/DOAG>

Connecticut Department of Emergency Services and
Public Protection
Division of Emergency Management and Homeland Security
Radiological Emergency Preparedness
1111 Country Club Road 3rd Floor
Middletown, CT 06457
860-685-8531
<https://portal.ct.gov/demhs>



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What Is A Nuclear Power Plant Emergency?

A nuclear power plant emergency may involve an unplanned release of radioactivity (tiny dust like particles and gases) into the atmosphere. The particles would be spread by the wind and eventually fall to earth potentially contaminating food, feed, and water supplies. The distance the particles would travel is dependent on weather conditions. The heaviest particles would fall quickly - nearest the point of release and likely within 10 miles of the power plant. Strong winds would carry lighter particles a greater distance – likely within 50 miles of the incident - and deposit them on surfaces at lower concentrations. Rain or snowfall could increase the rate at which the particles would fall to earth - creating some areas of higher concentration. Surface water can be contaminated by runoff or the deposition of particles. Large bodies of water (especially those with tidal action), rivers and faster flowing streams would allow for some dilution over time.

Exposure to radiologically contaminated particles is more likely during the first few days of an incident. Emergency notification and protective actions will protect people and animals closer to the release site and in the early phases of the incident. In the days, weeks and months following the release, concerns about ingesting contaminated food and water are expected. Radiation intensity decreases with time (as the particles decay) but extensive monitoring, sampling and testing during and after a release is the key to contamination control and reducing the health risk to the consuming public.

If you are a Connecticut farmer, livestock owner, fruit and vegetable grower, food processor/distributor or are involved in aquaculture and you are within 50 miles of a Connecticut or neighboring state's nuclear power plant, actions may be required to protect the food or water supplies in the event of a radiological release. You play an important role in this protection effort. Your actions may help mitigate the impacts of a nuclear power plant emergency.

How Would I Be Informed?

Procedures are in place to alert you to a local emergency and provide guidance on how to protect yourselves, your families and your assets. The primary means of initial emergency notifications is through the Emergency Alert System (EAS). Once activated, EAS allows local and state officials to interrupt radio and television programming with emergency information. These alerts will direct you to other information outlets providing details on the actions being taken by authorities and guidance on how you can prevent or minimize the impacts of radiological contamination.

Specific instructions will be provided through news releases from the Joint Information Center at the State Emergency Operations Center in Hartford. This guidance will be available on Connecticut's social media platforms, emergency preparedness application (CT Prepares), the CT DEMHS website and from United Way's 2-1-1 information center. The Department of Agriculture will also provide detailed guidance through their emails, web site, newsletters and extension service partners.

Primary EAS Stations (for initial notification)

WTIC - 1080 AM, 96.5 FM (Hartford)
WDRC - 1360 AM, 102.9 FM (Hartford)
WCTY - 97.7 FM (Norwich)

Other EAS Radio Stations

WWRX - 107.7 FM	WBMW - 106.5 FM	WPKT - 90.5 FM
WQGN - 105.5 FM	WNPR - 89.1 FM	WIHS - 104.9 FM
WLIS - 1420 AM	WXLM - 980 AM	WICH - 1310 AM
WKNL - 100.9 FM	WMRD - 1150 AM	WNLC - 98.7 FM

EAS TV Stations

WFSB - Channel 3 WTNH - Channel 8 WHPX - Channel 26
WVIT - Channel 30 WTIC - Channel 61

The Integrated Public Alert and Warning System (IPAWS) may also be used. This system is capable of providing text and audible alerts to most cell phones. Alerts are repeated or continuously broadcast until the immediate threat is over or initial notifications are no longer needed. If an individual is not in the area of the alert and they subsequently enter the impacted area while the threat is still active, their phones will alert and provide a

referral to detailed safety guidance. These alerts will work if your phone is in “silent mode” or “do not disturb mode” but not if your phone is in “airplane mode” or turned off. IPAWS is currently in use for life threatening weather emergencies like tornadoes and for presidentially declared emergencies.

What Is Radiation?

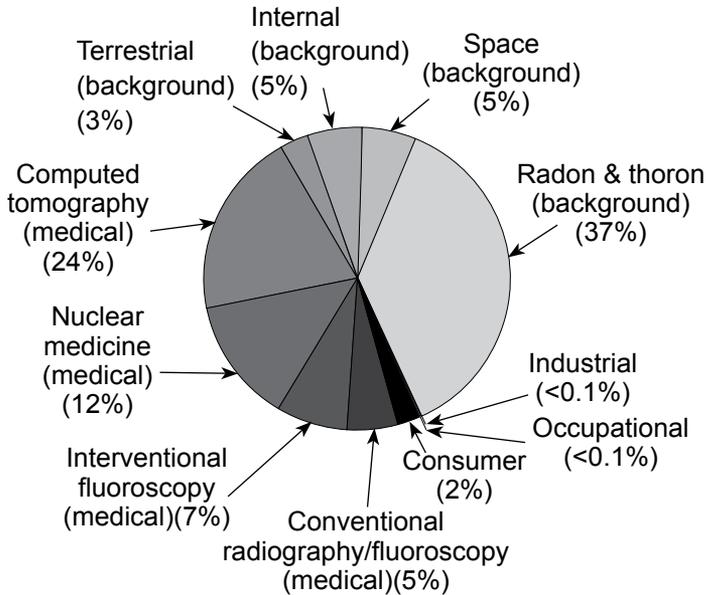
Simply speaking, radiation is a form of energy that occurs naturally or is man made. Natural radiation is found in the soil and in buildings and is also produced by the sun. Man made radiation sources are X-Ray machines, smoke detectors, and nuclear power stations.

Radiation is emitted by radioactive materials, travels like light or radio waves and can penetrate like X-rays. Radiation is tasteless, odorless and invisible. Exposure to radiation above certain levels may have adverse health effects on humans and animals. The effects will depend on the kind of radiation you are exposed to, the length of time you are exposed and how much of your body was exposed. External contamination can be removed by washing – soap and water decontamination. Internal contamination is more problematic. It could result in a long-term exposure and more significant health concerns. This booklet focuses on ingestion prevention in humans, animals and plants.

The unit of measure, Roentgen Equivalent Man (rem), is used to measure the amount of biological effect on the human body. Since one rem is such a large unit of radiation, generally smaller units of the rem are used. We call that smaller unit the millirem (mrem). One millirem is one thousandth of a rem. When we refer to an amount of exposure, the term “dose” is used. Dose is the amount of radiation exposure received measured in millirem.

Each year, United States residents receive about 625 millirem of radiation. Approximately half of that, 311 millirem, come from natural sources such as air, water, plants, rocks, the sun, outer space and radon gas in homes. The other 314 millirem come from a variety of man made sources like smoke detectors, tanning lamps and some industrial processes. The largest source of man made radiation exposure is from medical procedures.

Effective Dose Equivalent to Persons in the U.S. from Various Radiation Sources



Man Made

- Medical
 - Diagnostic X-Rays 33.0
 - Other Medical 267.0
 - Consumer Products 13.0
 - Occupational 0.5
 - Nuclear Power 0.1
 - Miscellaneous 0.3
- Millirem (MREM) Per Year Total 314.0

Natural Background

- Radon and Radon Daughters 228.0
 - Cosmic Rays 33.0
 - Terrestrial Radiation 21.0
 - Internal Radiation 29.0
- MREM Per Year Total 311.0

Total man-made and natural sources MREM Per Year 625.0

NCRP Report No. 160, "Ionizing Radiation Exposure of the Population of the United States," March 3, 2009 Bethesda, MD 20814.

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What Is Contamination?

Contamination is the accumulation of radioactive material in an area as it settles out of the atmosphere. The primary risk of contamination is ingesting the radioactive material into the body through breathing, eating, and drinking, or absorption through the skin. Once in the body, the material may create health problems.

Your concern, as a farmer or food producer, is the possibility of feed, water, livestock and produce becoming contaminated from contact with radioactive particles. Contamination may enter the human food chain through water, plants, animals and via milk or other farm produce.

Effects Of Radioactive Deposits On Food And Water Supplies

Depending on the amount of radioactive material released into the atmosphere from a nuclear power plant accident, the duration of the release and the prevailing weather conditions, people, animals, fish, crops, land and water near the site of the emergency could be affected. Of initial concern would be the condition of fresh milk from lactating animals grazing on pastures and drinking from open sources of water. Sampling for contamination can be performed at the farm or a processing plant. If contaminated milk and/or processed milk products are identified, state or government officials will determine whether to dispose of these products or to hold them until they are safe for consumption.

The dilution of radioactive materials in large bodies of water should make the contamination of fish, shellfish and other aquaculture products less likely. Testing, before consumption, is still recommended.

Another concern is the possible contamination of vegetables, grains, fruits, and nuts. The severity of the impact of any contamination would depend on the time of the year a release occurred. The time immediately prior to, or during, harvest is the most critical period. Crops will be sampled and analyzed by the appropriate government agencies to ensure that they are safe to

eat. An additional concern is the possible impact of contamination on non-dairy livestock, poultry and non-edible plants that may be used in homes. Pasture soils, feed, timber products, flowers, water sources, meat and poultry products, will be sampled and analyzed to ensure that they are safe to handle or eat.

Radioactive contamination of milk or food products in an affected area can also occur during processing or during transportation. This can result from exposure to radioactive materials on the ground or in the air, and from contact with other contaminated products.

State agencies have plans in place and regularly participate in training and drills to assist with public protection. Connecticut's Department of Public Health (DPH) – water protection division - will sample and test surface water. The Department of Consumer Protection (DCP) will sample food products and the Department of Agriculture (DoAg) will sample a variety of local farm products. Samples are analyzed at the Connecticut DPH laboratory and other partner laboratories. Radiation health physicists will use the sample data to identify and map contaminated areas. Federal radiation exposure guidelines - dose limits – are then used to make recommendations to local authorities regarding exclusion zones and embargoes of food products.

Emergency Planning Zones

The Federal government, through the Federal Emergency Management Agency (FEMA) and the Nuclear Regulatory Commission (NRC), requires pre-incident planning be accomplished for specific areas around a nuclear power plant. These specific areas are called Emergency Planning Zones (EPZs). EPZs are defined as the areas for which planning is needed to assure that prompt and effective actions can be taken to protect the public in the event of an incident or emergency.

The Plume Exposure Pathway EPZ

This is the area within an approximate 10-mile radius of a commercial nuclear power plant. Emergency planning is required and in place to deal with the potential of direct exposure to radiation. If there is an incident, you will be advised if there is a Site Area Emergency or a General Emergency. These two levels

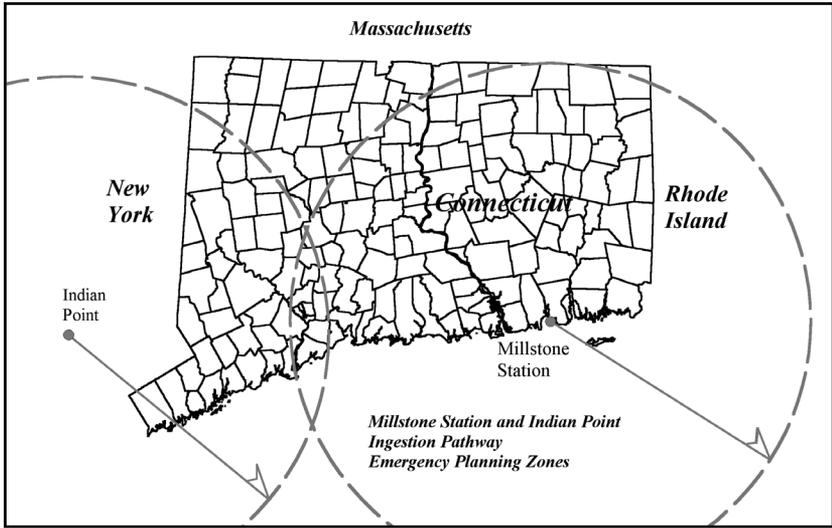
have the highest potential for a radioactive release occurring. The Connecticut DESPP DEMHS Radiological Emergency Preparedness unit, in coordination with Dominion Energy/ Millstone, annually publishes a booklet titled Safety Planning Information for Neighbors of Millstone Power Station. This booklet is mailed to residents and made available to business within the 10 mile EPZ. It details protective actions that can be taken to mitigate the effects of direct exposures. This booklet is also available in hard copy from local emergency management authorities and on line (town and state web sites). It provides information on EAS notification, how to monitor-and-prepare for incidents, shelter-in-place, evacuate and when to take potassium iodide (KI). The booklet gives directions to Community Reception Centers (CRC) where individuals can be surveyed for contamination and decontaminated, if needed. Many other services are available at a CRC including assistance with relocation and temporary housing. Agricultural interest within the 10-mile radius of Millstone should make sure they have a copy of this Agriculture booklet and the Safety Planning booklet.

The Ingestion Exposure Pathway EPZ (IPZ)

This is the area within an approximate 50-mile radius of a commercial nuclear power plant. Emergency planning is required and in place to deal with the potential of indirect exposure to radiation from eating contaminated food or drinking contaminated water, milk, or other liquids.

Two areas in Connecticut are located within Ingestion Exposure Pathways. One area is located within the fifty mile Ingestion Exposure Pathway EPZ of Dominion Energy's Millstone Power Station in Waterford, CT. A second area is in western Connecticut and includes towns within fifty miles of the Indian Point Energy Center - owned and operated by Entergy. This power station is located in Buchanan, New York. (See the Ingestion Pathway Emergency Planning Zone map for Connecticut, New York and Rhode Island – "Ingestion Pathway Emergency Planning Zones For Connecticut (50 Mile)" on page 8. Starting on "Connecticut Cities / Towns In The Millstone Station Ingestion Pathway EPZ" on page 21 there is a full list of Connecticut cities and towns within the Millstone and Indian Point Ingestion Exposure Pathways.)

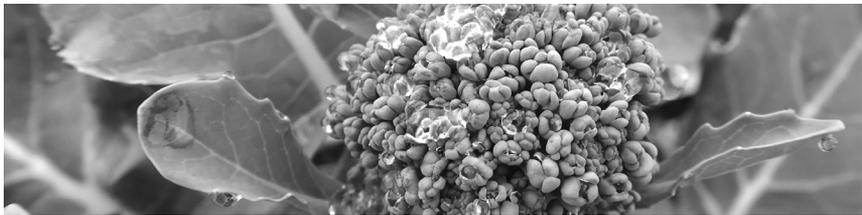
Ingestion Pathway Emergency Planning Zones For Connecticut (50 Mile)



The safety of the food supply within the 50-mile Ingestion Exposure Pathway is of concern to everyone but will greatly impact members of the agricultural community in Connecticut, New York and Rhode Island. A radiological release to the atmosphere would affect both water and land and then enter the region's food supply. Eating contaminated foods and drinking contaminated milk and water could have a harmful, long-term effects on the health of humans, pets and other animals.

Federal, state, and local government emergency response organizations will notify and advise the agricultural community on what actions to take in the event of a radiological emergency. This booklet provides an overview of the expected guidance.

Additional resources are found on the Extension Disaster Education Network (EDEN) at <https://extensiondisaster.net/>.



Initiating Protective Actions

There are two types of protective actions that help prevent or lessen the possibility of persons eating contaminated food or drinking contaminated water. They are Precautionary Actions and Protective Actions. The decision to recommend either of these actions will be based on the emergency conditions at the power plant, available information on the amount of radiation that may be and/or has been released to the environment, meteorological considerations, etc.

Precautionary Actions

Precautionary Actions are measures taken, prior to confirmation of contamination, to prevent or minimize the potential contamination of food products. An example is placing dairy animals on stored feed and water.

Protective Actions

Protective Actions are measures taken to isolate or contain food and prevent its introduction into commerce and to determine whether further actions are appropriate. An example would be to restrict or withhold agriculture and dairy products from the marketplace by prohibiting transportation out of the affected areas.

Recommended Precautionary Actions For Food Supply Protection Prior To Confirmation Of Contamination

The first priority is to protect humans, household pets and lactating animals from exposure to contamination. Precautionary actions are given to the agricultural communities in advance of a potential exposure to allow time to protect human health and agricultural assets before individuals are asked to take shelter or leave the area.

The following is a summary of Precautionary actions to be taken prior to an exposure to radiological contamination:

Make a Plan: Develop a plan of action to implement the recommendations listed in this booklet. Your plan should identify needed resources and their locations. If the governor declares a state of emergency, he or she may mobilize resources to protect the health and safety of the public and the economic viability of the agricultural community. The last page of this booklet lists resources that will help you to formulate a plan. Review and update your plan each year in light of changes in animal husbandry recommendations and technology. It is also important to remember that you should take action only if instructed to do so by the State of Connecticut. Insurance reimbursements may not be allowed for individuals or businesses that are determined to be outside of the impact zone.

Stay Informed: Tune in to radio and television EAS stations. If you need more information, contact the Connecticut Department of Agriculture Commissioner's Office (the web site address, mailing address and phone number are on this booklet's inside covers). The United Way 2-1-1 information call center will also have up to date information on emergencies and available resources and support. Local emergency management offices and state officials will communicate with the public across multiple platforms – radio, television, social media, etc. Monitor trusted information sources and prepare to take recommended actions.

Dairy Animals: There is a high priority placed on the removal of lactating animals from pasturage and providing them with shelter, protected water, and stored feed. This precautionary action offers protection to the livestock and reduces the chance of the introduction of contamination to the food chain. This effort could also be a very time consuming task and one that requires farmers to be outside for extended periods of time. Completing these actions before contamination is present gives farmers' time to focus on their own evacuation or shelter in place preparations.

Note: Prioritize your animals if shelter or time is limited. Bulls, steers, dry cows and non-lactating animals may be a lower priority.

Other Livestock and Pets: Backyard chickens, horses and pets will also need to be sheltered and placed on stored feed and water where possible. Your plan should consider transport of large animals - like horses - to locations outside of the 50-mile Ingestion Pathway Exposure zone. Pets should be brought inside. Keep pets on a leash while they are outside. Consider setting up a covered area for relief breaks and exercise. Be prepared to wash the feet of pets before they reenter your home if you are advised to do so. Qualified service animals and household pets are accepted at many evacuation shelters and Community Reception Centers (for monitoring and decontamination) so it is helpful to have copies of their registrations/certifications and veterinary records on hand.

Note: If closed sided barns are not available, open sided shelters with a roof or a densely forested area will offer some protection. If you are transporting animals, their trailers will offer some protection.

Feed Hay and Silage: Cover feed that is outdoors or bring feed inside a building immediately. Air circulation systems in feed/ grain silos should be turned off or, if running at minimal levels, disposable hay bales or household air filters can be used to cover the intake. Feed that must be stored outside can be covered by a plastic tarp. A six mil thickness is recommended.

Water: Be prepared to use protected water supplies such as wells, enclosed storage tanks and covered cisterns. Disconnect rainwater collection and drainage systems from water storage containers.

Produce, Fruits and Vegetables: When precautionary measures are announced for your area, you can still consume local produce until advised otherwise. Food stored inside in pantries, refrigerators, cellars and the like are consumable. Produce, honey, maple syrup, grapes, edible mushrooms and other food products are safe to consume or process as long as there is no contamination in the area. As usual, thoroughly wash and peel outer layers and, in the case of leafy vegetables, remove outer layers before eating. ***Do not transport or sell any of these products until cleared to do so by state or local officials. This includes produce from hydroponic and backyard gardens as well as farmers markets.***

Limit fishing, hunting, hiking and other outdoor activities:

Connecticut's Department of Energy and Environmental Protection (CT DEEP) may close marinas, parks and other outdoor recreational areas as a precaution. It will be important for individuals to remain near structures that offer more protection than an open boat, tent or open sided pavilion. Closing outdoor venues will also facilitate evacuation, if needed.

How will you know if contamination is present?

You will be told if a release of radioactive contaminants has occurred off the plant site. The EAS or IPAWS systems will alert you. In the immediate aftermath of a release, populations within 10 miles of the plant may shelter-in-place, take potassium iodide (KI), or be asked to evacuate. Precautionary evacuations can be ordered so that populations avoid radiological exposures altogether. Depending on the circumstances of the emergency, schools may enact their early dismissal procedures. This allows families time to reunite and prepare for evacuation or sheltering orders. Evacuees may opt to go to a Community Reception Center (CRC) for monitoring and decontamination. In the early phases of an incident, CRCs also offer housing referrals, social services, KI and a place for family reunification. Sheltering is ordered if a population cannot be evacuated in a timely or safe manner (due to a snowstorm, road congestion or other impediments). If radioactive iodine is released in the plume, sheltered or evacuating populations will be asked to ingest KI to protect their thyroid from a long-term cancer risk. These initial protective actions are for those within 10 miles of the plant. A full array of Protective Actions for the Ingestion Exposure Pathway (within 50 miles of the plant) and agricultural communities in particular, follows.

Recommended Protective Actions When Contamination Is Found

The following are examples of protective actions that may be recommended if a release of radioactive materials occurs and contamination of agricultural products is found by appropriate state and local government officials:

- When you go outside, wear protective clothing that covers all portions of the body, similar to what you would wear when applying pesticides; for example, coveralls or long-sleeved shirt, long pants, boots, gloves, etc.
- Wear a respirator, protective mask, or place a folded (preferably dampened) cloth over your mouth and nose when outside to prevent inhalation of radioactive materials.
- When covered feed is needed, remove the covering in a way that minimizes the transfer of contamination and do so in protective clothing.
- Remove outer clothing before going indoors. Avoid pulling clothing over your face to minimize ingestion. Cut clothing away from the body if necessary. Place potentially contaminated clothing in plastic bags and mark the bags as hazardous waste.
- Showering is strongly recommended. Use lukewarm water, shampoo and soap but avoid scrubbing. Control the flow of water over the face to avoid ingestion.
- Wash hands thoroughly before smoking, vaping, preparing or eating food.
- Minimize your pet's time outside. Wash your pet's feet before they reenter your home. A bath with pet shampoo and water is recommended.
- Feed and water your pets from protected sources. Do not allow them to play with toys that are potentially contaminated.
- Do not consume raw or fresh milk from dairy animals, fresh garden vegetables, or eggs from within the Ingestion Exposure Pathway Emergency Planning Zone surrounding the nuclear plant until advised it is safe to do so by appropriate health officials.
- Do not consume produce, fruit, honey, maple syrup, grapes, edible mushrooms, berries and other food products until they are sampled, tested and deemed safe for consumption. (This includes root vegetables and tubers.)
- Do not process fresh products into jams, jellies, bread, beer, wine or other consumables until advised that it is safe to do so.

- Do not process or distribute agricultural and forest products like sod, flowers, Christmas trees, firewood or building materials (logs).
- Do not engage in dust-producing activities such as cultivating, disking, baling, or harvesting.
- Do not transport or market seafood, fish and meat products from the Ingestion Exposure Pathway until advised it is safe to do so by appropriate health officials.
- Follow the advice of officials when considering how to handle live animals that require extended periods of sheltering. Continue feeding with protected feed and water. Continue to restrict access to open pastures and unprotected feed until officials have deemed them safe. Consider calcium and other supplements.
- Lactating animals can be milked. Follow official guidance on milk storage and the handling of milk products. Depending on the radioactive isotopes involved, milk that is turned into cheese may be stored until the half-life of the isotope renders the product safe to eat.
- Fish and game should not be consumed until they have been tested. Because of the variabilities of home range and migration patterns of game species, state officials may impose restrictions on animals from outside of the Ingestion Exposure Pathway.
- Farm raised and wild mushrooms should not be consumed until they have been tested. Root structures for fungi can be extensive and may transport radioactive isotopes beyond the surface contamination boundaries.

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

Personal protection is the highest priority within an Ingestion Exposure Pathway zone, especially in restricted areas. If you are told to avoid certain areas, do so for your own safety and the safety of those around you.

The Centers for Disease Control and Prevention have on line resources related to radiation exposure. Stay safe by being informed. <https://www.cdc.gov/nceh/radiation/emergencies/index.htm>

Other Considerations:

Humans, Animals and Potassium Iodide: Potassium Iodide (KI), is an over-the-counter salt tablet that can protect the thyroid when there is a chance you might be exposed to a harmful amount of radioactive iodine. KI saturates the thyroid gland with non-radioactive iodine and prevents the uptake of radioactive iodine reducing the chance of thyroid cancers later in life. Not every radiation emergency results in the release of radioactive iodine. Do not ingest KI until you are told it is needed. KI is a supplement to the primary protective actions of evacuation and/or sheltering and should only be taken at the direction of state health officials. KI does not protect against other radioactive materials that might be released during a nuclear power plant emergency. Within the 10-mile EPZ, emergency managers maintain stocks of KI for local residents and workers. During an emergency, KI will also be available at community reception centers.

Do not give KI to your pets or livestock. Administering KI to pets or livestock should only be done under the guidance of a veterinarian. KI can harm animals if not dosed correctly.

For additional information on planning for the safety of pets and animals during an emergency, go to <https://www.ready.gov/pets>.

For Meat and Meat Products: Livestock exposed to external contamination could be used for food if they are adequately washed and monitored by state officials before slaughtering. Animals can be decontaminated with soap and water. While handling animals, you should wear protective clothing to prevent contaminating yourself. Meat animals with internal contamination should not be slaughtered until you are advised by State authorities that it is safe to do so. Instructions will be given on a case-by-case basis.

For Animal Feeds: Actions relative to animal feeds, other than pasture, should be carried out on a case-by-case basis. Consult extension service professionals for estimates on the amounts of feed and water that should be protected for the number and type of animals that you own.

For Poultry and Poultry Products: Poultry raised outdoors, especially those kept for egg production, will be monitored by state or local officials taking samples and performing laboratory tests to determine the presence of radioactive contamination. If contamination is found, state or local officials may advise that poultry and eggs should not be eaten. Poultry raised indoors and kept on protected feed and water will likely not be contaminated but should still be tested.

For Fish & Shellfish: Fish/shellfish and other aquatics raised in ponds should not be harvested unless appropriate state or local officials have determined - through laboratory analysis of samples - that they are safe.

For Water Supplies: Open sources of water, such as rain barrels and tanks, should be protected or covered to prevent contamination. Covered wells and other covered or underground sources of water probably will not become contaminated. Radiation contaminants deposited on the ground will travel very slowly unless soils are sandy. It is unlikely that underground water supplies will be affected.

For Honey: Honey and bee-hives will need to be sampled and analyzed by appropriate state or local officials if radioactive contamination is detected in the area. You will be instructed by these officials on how to handle the hives and honey.

For Maple Syrup: Maple syrup and items made from syrup will need to be sampled and analyzed by appropriate state or local officials if radioactive contamination is detected in the area. You will be instructed by these officials on how to handle existing taps. Stored syrup and syrup products will also need to be tested before marketing.

For Grains: If grains are permitted to grow to maturity, most contamination will probably be removed by the wind and rain. The process of milling and polishing will probably remove any remaining contamination. Sampling and laboratory analysis will determine if the grain is safe to eat.

For Soils: If State or local government officials find that the soil is contaminated, proper soil management procedures can be implemented to reduce contamination to safe levels. Idling, the non-use of the land for a specific period of time, may be

necessary. In some cases, crops that take up certain nutrients and contaminants could be planted, harvested and then disposed of to help decontaminate the soil. However, in situations involving highly contaminated soil, removal and disposal may be more appropriate. State officials will let you know what actions are appropriate.

Note: Radioactive decay is a natural process whereby radioactivity becomes reduced over time. Some radioactive elements reduce to a harmless level in a relatively short time. Guidance will be provided on the isotopes involved and their half-life.

For Warehouses and Terminals: Windows and vents to outside air should be closed. Products will be sampled and tested before they can be transported or distributed. Packaged foods may not be harmful to eat if the outer wrappings are cleaned with soap and water before opening. The contaminated packaging should be handled carefully using protective clothing and a mask. The wrappings should be properly discarded in bags marked as a radiological hazard.

For Other Food Products: Other food products not covered in this discussion will need to be sampled and analyzed by appropriate state or local officials if radioactive contamination is detected in the area. You will be instructed by these officials on how to handle these food products.

Post-Emergency Actions

The following sections describe post-emergency actions that may take place if contamination is verified.

Restricted Zone(s): Designation of an area, or areas, from which the population is evacuated or relocated and to which access is controlled.

Re-entry: Re-entry is the temporary entry, under controlled conditions, into a restricted, contaminated area. If you have been evacuated from your area, you may be allowed to return temporarily to your farm when conditions permit. State or local officials will provide specific instructions on re-entry points, routes to use and safety precautions to take. Re-entry will allow you to perform such vital activities as milking, watering, and feeding farm animals.

Relocation: The non-emergency removal of populations from areas that are to be restricted due to projected exposures from deposited radioactive materials that exceed protective action guidelines. (Relocation may also occur if critical infrastructure is insufficient to support a population.)

Return: The orderly reoccupation of areas that were evacuated during the emergency phase of an accident or from which populations were relocated during the post-emergency phase.

Recovery: In the aftermath of a nuclear power plant incident, a key element of recovery is the process of reducing radiation in the environment to acceptable levels for normal daily living. Following the emergency, federal, state and local government officials will continue to take samples of air, water, soil, crops, and animal products from your farm or business. You will be provided with instructions and assisted with the decontamination of your animals, food and property, if such actions are necessary. Recovery also includes improvements across a spectrum of other capabilities. The restoration of infrastructure, housing, health and social services, natural and cultural resources are important elements of economic recovery. Recovery planning and activities, at both the state and local levels, will take time but will advance impacted communities toward safe and reasonable levels of restoration.

Temporary Embargoes: Following a radiological emergency, and in some cases during an emergency, state or local officials may restrict the movement of food products and withhold them from the marketplace if they are found to be contaminated. These products should not be released until they are safe for consumption, or until a decision is made to dispose of them. You will be instructed how to safely handle and dispose of contaminated food products and how to decontaminate your animals, food, and property, if such actions are necessary. Contaminated food is isolated (temporary embargoed) to prevent its introduction into the market place. Federal, state and local government officials will work together to determine whether condemnation and disposal are appropriate.

Condemnation: The designation of agricultural products as unfit for consumption, as determined by federal or state government officials.

Reimbursement: Repayment for economic losses caused as the result of an accident at a nuclear power plant. Federal legislation requires nuclear power plants to participate in an insurance pool to cover legitimate claims for losses incurred as the result of a radiological emergency. Connecticut based American Nuclear Insurers handles the reimbursement process. This process will likely take years to complete.

In the initial phases of the emergency, if you are ordered to evacuate, you will be eligible for reimbursement of reasonable emergency related expenses that result from the nuclear incident. This includes food, lodging, transportation, lost wages, property damage and medical treatment. As the scope of the incident is defined, compensation for financial losses resulting from government ordered condemnations, embargoes, quarantines and loss of equipment or facilities will be addressed. It is very important to document your losses. You will be instructed on how to submit claims and work with recovery coordinators.

Summary

If a radiological emergency occurs, the Departments of Agriculture, Public Health, Consumer Protection and Environmental Protection will help determine what areas within Connecticut are affected.

These departments will provide field sampling teams to take soil, milk, water, and food samples to determine if there are any radiological concerns in your area. The Department of Emergency Services and Public Protection will coordinate these efforts. Federal sampling teams will support this effort and multiple federal agencies will work to ensure the health and safety of state and regional populations.

Be prepared to follow the guidelines for protecting and caring for your livestock, giving lactating dairy animals your first priority by sheltering them, and using feed and water from protected sources. There is no immediate requirement to destroy milk or other farm produce you feel may be contaminated. State

agencies will test all consumables for contamination levels. The result of these tests will be used to advise you on the status of your products.

Protect yourself, your family, and your employees from unnecessary exposure. Avoid needless handling of contaminated produce.

Leave plants and crops in the ground until officials clear them for harvesting. If you are directed to destroy milk or produce, you will be given specific instructions on how and where this is to be done.

Your role in the recovery effort begins when you are first notified of an incident. Stay informed, prepare to execute your safety plan, review the protective actions described in this booklet, document incident related expenses and follow the guidance of local, state and federal agencies. If you have questions, contact the state Department of Agriculture, the Department of Emergency Services and Public Protection or utilize the resource list on “Additional Resources:” on page 23.



Connecticut Cities / Towns In The Millstone Station Ingestion Pathway EPZ

Andover	E. Lyme	Middlefield	Simsbury
Ansonia	E. Windsor	Middletown	Somers
Ashford	Eastford	Milford	S. Windsor
Avon	Ellington	Montville	Southington
Beacon Falls	Enfield	Naugatuck	Sprague
Berlin	Essex	New Britain	Stafford
Bethany	Farmington	New Haven	Sterling
Bloomfield	Franklin	New London	Stonington
Bolton	Glastonbury	Newington	Stratford
Bozrah	Griswold	N. Branford	Suffield
Branford	Groton City	North Haven	Thompson
Bristol	Groton Town	N. Stonington	Tolland
Brooklyn	Guilford	Norwich	Union
Burlington	Haddam	Old Lyme	Vernon
Canterbury	Hamden	Old Saybrook	Voluntown
Chaplin	Hampton	Orange	Wallingford
Cheshire	Hartford	Oxford	Waterbury
Chester	Hebron	Plainfield	Waterford
Clinton	Killingly	Plainville	W. Hartford
Colchester	Killingworth	Plymouth	W. Haven
Columbia	Lebanon	Pomfret	Westbrook
Coventry	Ledyard	Portland	Wethersfield
Cromwell	Lisbon	Preston	Willington
Deep River	Lyme	Prospect	Windham
Derby	Madison	Putnam	Windsor
Durham	Manchester	Rocky Hill	Windsor Locks
E. Haddam	Mansfield	Salem	Wolcott
E. Hampton	Marlborough	Scotland	Woodbridge
E. Hartford	Meriden	Seymour	Woodstock
E. Haven	Middlebury	Shelton	

Connecticut Cities / Towns In The Indian Point Ingestion Pathway EPZ

Ansonia	Goshen	New Milford	Stamford
Beacon Falls	Fairfield	Newtown	Stratford
Bethany	Greenwich	Norwalk	Trumbull
Bethel	Kent	Orange	Warren
Bethlehem	Litchfield	Oxford	Washington
Bridgeport	Middlebury	Redding	Waterbury
Bridgewater	Milford	Ridgefield	Watertown
Brookfield	Monroe	Roxbury	Weston
Cornwall	Morris	Seymour	Westport
Danbury	Naugatuck	Sharon	Wilton
Darien	New Canaan	Shelton	Woodbridge
Derby	New Fairfield	Sherman	Woodbury
Easton	New Haven	Southbury	



Additional Resources:

Federal Emergency Management Agency
www.fema.gov

U.S. Department of Agriculture
www.usda.gov

U.S. Environmental Protection Agency
www.epa.gov

U.S. Food and Drug Administration
www.fda.gov

CT Department of Energy and Environmental Protection
www.ct.gov/deep

CT Department of Health
www.ct.gov/dph

University of Connecticut Extension
www.extension.uconn.edu

Dominion Energy
www.dominionenergy.com/company/making-energy/nuclear/millstone-power-station#

American Nuclear Insurers
www.amnucins.com

CT DEMHS



CT DEMHS Twitter



Download the CT Preparedness app for your phone or tablet at:
<https://portal.ct.gov/Emergency-Preparedness>

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