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DURING THE FLOOD

This information may help individuals and businesses minimize damage during a flood event. Information includes details on using sump pumps, avoiding groundwater damage and reducing flooding from drains and septic systems. Also, all households should have an emergency supply kit along with an evacuation plan for family members, pets, and livestock. This guide also provides tips on flood health and safety.

Evacuation

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Be prepared to evacuate by reviewing this summarized list of important evacuation information.

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This information includes how to salvage and discard of pesticides safely.

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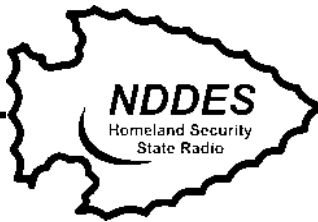
These guidelines will help determine if frozen food is safe for consumption.

Basic Emergency Supply Kit

Supply Kit

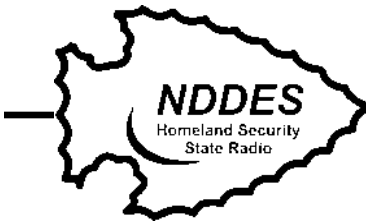
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This list summarizes items to consider for your emergency supply kit.



■■■ Evacuation Guidelines

Always:	If time permits:
<p>Keep a full tank of gas in your car if an evacuation seems likely. Gas stations may be closed during emergencies and unable to pump gas during power outages. Plan to take one car per family to reduce congestion and delay.</p>	<p>Gather your disaster supplies kit.</p>
<p>Make transportation arrangements with friends or your local government if you do not own a car.</p>	<p>Wear sturdy shoes and clothing that provides some protection, such as long pants, long-sleeved shirts, and a cap.</p>
<p>Listen to a battery-powered radio and follow local evacuation instructions.</p>	<p>Secure your home:</p> <p>Close and lock doors and windows.</p> <p>Unplug electrical equipment, such as radios and televisions, and small appliances, such as toasters and microwaves. Leave freezers and refrigerators plugged in unless there is a risk of flooding.</p>
<p>Gather your family and go if you are instructed to evacuate immediately.</p>	<p>Let others know where you are going.</p>
<p>Follow recommended evacuation routes. Do not take shortcuts; they may be blocked.</p>	
<p>Be alert for washed-out roads and bridges. Do not drive into flooded areas.</p>	
<p>Stay away from downed power lines.</p>	



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Evacuation Tips

Evacuations are more common than many people realize. Hundreds of times each year, transportation and industrial accidents release harmful substances, forcing thousands of people to leave their homes. Fires and floods cause evacuations even more frequently. And almost every year, people along the Gulf and Atlantic coasts evacuate in the face of approaching hurricanes.

When community evacuations become necessary, local officials provide information to the public through the media. In some circumstances other warning methods, such as sirens or telephone calls, are also used. Government agencies, the American Red Cross, Salvation Army, and other disaster relief organizations provide emergency shelter and supplies. To be prepared for an emergency, you should have enough water, food, clothing and emergency supplies to last at least three days. In a catastrophic emergency, you might need to be self-sufficient for even longer.

The amount of time you have to evacuate will depend on the disaster. If the event can be monitored, like a hurricane, you might have a day or two to get ready. However, many disasters allow no time for people to gather even the most basic necessities. This is why you should prepare now.

- **Planning for Evacuation**
- Ask your local emergency manager about community evacuation plans.
- Learn evacuation routes. If you do not own a car, make transportation arrangements with friends or relatives.
- Talk with your household about the possibility of evacuation. Plan where you would go if you had to leave the community. Plan where you would go if you had to leave the community.
- Plan a place to meet your household in case you are separated from one another in a disaster. Ask a friend or relative outside your town to be the checkpoint so that everyone in the household can call that person to say they are safe.
- Find out where children will be sent if schools are evacuated.
- Assemble a disaster supply kit. Include a battery-powered radio, flashlight, extra batteries, food, water and clothing.
- Keep your fuel tank full if evacuation seems likely. Gas stations may be closed during emergencies and unable to pump gas during power outages.

- Know how to shut off your home's electricity, water and gas supplies at main switches and valves. Have the tools you need to do this (pipe or crescent wrench).
- **What to Do When You Are Told To Evacuate**
- Listen to the radio and follow local instructions. If the danger is a chemical release and you are instructed to evacuate immediately, gather your household and go. Take one car per household when evacuating. This will reduce traffic congestion and delay. In other cases, you may have time to follow these steps:
 - Gather food, water, clothing, emergency supplies and insurance and financial records.
 - Wear sturdy shoes and clothing that provides some protection, such as long pants, long-sleeved shirts and a cap.
 - Secure your home. Close and lock doors and windows. Unplug appliances. If a hard freeze is likely during your absence, take actions needed to prevent damage to water pipes such as:
 - Turn off water main.
 - Drain faucets.
 - Turn off inside valves for external faucets and open the outside faucets to drain.
 - Turn off main water valve and electricity, if instructed to do so.

Source: FEMA, [Are You Ready: A Guide to Citizen Preparedness](#), 2002.



FAMILY EMERGENCY PLAN

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Make sure your family has a plan in case of an emergency. Before an emergency happens, sit down together and decide how you will get in contact with each other, where you will go and what you will do in an emergency. Keep a copy of this plan in your emergency supply kit or another safe place where you can access it in the event of a disaster.

Out-of-Town Contact Name:	Telephone Number:

Email:	

Neighborhood Meeting Place:	Telephone Number:

Regional Meeting Place:	Telephone Number:

Evacuation Location:	Telephone Number:

Fill out the following information for each family member and keep it up to date.

Name:	Social Security Number:

Date of Birth:	Important Medical Information:

Name:	Social Security Number:

Date of Birth:	Important Medical Information:

Name:	Social Security Number:

Date of Birth:	Important Medical Information:

Name:	Social Security Number:

Date of Birth:	Important Medical Information:

Name:	Social Security Number:

Date of Birth:	Important Medical Information:

Write down where your family spends the most time: work, school and other places you frequent. Schools, daycare providers, workplaces and apartment buildings should all have site-specific emergency plans that you and your family need to know about.

Work Location One	School Location One
Address: _____	Address: _____
Phone Number: _____	Phone Number: _____
Evacuation Location: _____	Evacuation Location: _____
Work Location Two	School Location Two
Address: _____	Address: _____
Phone Number: _____	Phone Number: _____
Evacuation Location: _____	Evacuation Location: _____
Work Location Three	School Location Three
Address: _____	Address: _____
Phone Number: _____	Phone Number: _____
Evacuation Location: _____	Evacuation Location: _____
Other place you frequent	Other place you frequent
Address: _____	Address: _____
Phone Number: _____	Phone Number: _____
Evacuation Location: _____	Evacuation Location: _____

Important Information	Name	Telephone Number	PolicyNumber
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Doctor (s)

Other:

Phamacist:

Medical Insurance:

Homeowners/Rental Insurance



ADDITIONAL IMPORTANT PHONE NUMBERS & INFORMATION:

1 Family Emergency Plan

EMERGENCY CONTACT NAME: TELEPHONE:

OUT-OF-TOWN CONTACT NAME: TELEPHONE:

NEIGHBORHOOD MEETING PLACE: TELEPHONE:

OTHER IMPORTANT INFORMATION:

DIAL 911 FOR EMERGENCIES

<FOLD>
HERE

ADDITIONAL IMPORTANT PHONE NUMBERS & INFORMATION:

1 Family Emergency Plan

EMERGENCY CONTACT NAME: TELEPHONE:

OUT-OF-TOWN CONTACT NAME: TELEPHONE:

NEIGHBORHOOD MEETING PLACE: TELEPHONE:

OTHER IMPORTANT INFORMATION:

DIAL 911 FOR EMERGENCIES

ADDITIONAL IMPORTANT PHONE NUMBERS & INFORMATION:

1 Family Emergency Plan

EMERGENCY CONTACT NAME: TELEPHONE:

OUT-OF-TOWN CONTACT NAME: TELEPHONE:

NEIGHBORHOOD MEETING PLACE: TELEPHONE:

OTHER IMPORTANT INFORMATION:

DIAL 911 FOR EMERGENCIES

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ADDITIONAL IMPORTANT PHONE NUMBERS & INFORMATION:

1 Family Emergency Plan

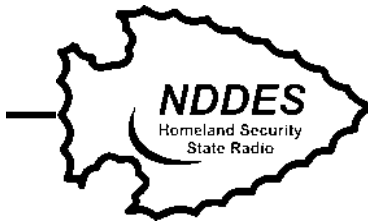
EMERGENCY CONTACT NAME: TELEPHONE:

OUT-OF-TOWN CONTACT NAME: TELEPHONE:

NEIGHBORHOOD MEETING PLACE: TELEPHONE:

OTHER IMPORTANT INFORMATION:

DIAL 911 FOR EMERGENCIES



Caring for Important Papers

▪ Steps to Take Before and After a Flood

Valuable papers and records should be given maximum protection from any disaster. Water and fire-resistant file cabinets are available for storing some records at home. A commercial storage area, such as a safe-deposit box, will assure protection from theft and physical damage.

Consider making copies of your valuable papers for selected professionals, family members or friends, to assure their prompt availability when needed. Lists of all such documents and the location of each should be stored in more than one place.

If important documents or books have been damaged by floodwater, follow the instructions outlined here for drying. However, it is a good idea to photocopy any important papers as a precautionary measure. Even if papers appear to have dried successfully, they may disintegrate rapidly because of substances in the floodwater.

▪ Keep an Up-to-Date Household Inventory

- An inventory of household items and other property is especially valuable in case of a disaster. When making the inventory, do not overlook items kept in cabinets, closets, the freezer, garage and yard. Consider making a video of your inventory and property; at minimum, take some photographs. An accurate inventory will help determine if you have enough insurance to cover the contents of your home. Whenever possible, record the date of purchase and purchase price of items. Keep the inventory current.

▪ Papers to be Stored in the Home

- *Keep the following papers stored at home in a water-proof, fire-proof, locked box:*
 - Family advisors' names and addresses
 - Educational, employment and health records
 - Copies of birth and marriage certificates, insurance policies, driver license

- numbers, income tax returns, current bank balances, loan payment books
- Guarantees and warranties, appliance manuals, rental property records
- Household inventory, safe-deposit records, one copy of a list of valuable
- papers and their locations
- **Papers to be Stored in a Safe-deposit Box**

- *Keep the following papers stored in a safe-deposit box, especially during a disaster:*

Property records, deeds, titles and/or leases

- Copies of wills (his and hers); birth, death and marriage certificates;
 - Divorce decrees; adoption or custody papers; citizenship papers;
 - passports; military service records
- Stocks records, bond certificates, contracts (including promissory notes),
 - supporting documents of years of large transactions, unusual losses or deductions
- List of insurance policies, automobile bills of sale and titles, social security cards
- Government savings bonds, religious records, retirement papers, copyrights and patents
- Household inventory, one copy of a list of valuable papers and their locations

- **Drying Papers and Books**

- Dry papers and books slowly for best results. Photocopy valuable papers as a precautionary measure because flood-damage may cause rapid deterioration. If you don't have the time to clean and dry them immediately, consider putting them in the freezer to prevent mildewing. Place wax paper between layers of paper bundles or books so they can be separated easily when removed.
 - Wipe book covers with a solution of one part rubbing or denatured alcohol and one part water.
 - Place books on end with leaves separated. When partially dry, pile and press books to keep pages from crumpling. Alternate drying and pressing until books are thoroughly dry. This helps prevent mildew. Use a fan to hasten drying.
 - If papers and books are very damp, sprinkle pages with corn

starch or talcum powder to absorb moisture. Leave powder for several hours, then brush it off.

- For valuable books that are nearly dry, consider pressing the pages with an electric iron set on low. This is a tedious process, but may be worth the effort. Separate the pages to prevent musty odors.
- Some chemicals help stop mold growth. Contact your county Extension office for recommendations on use.
- When books are thoroughly dry, close them and use C-clamps to help them retain their shape. Wipe vinyl and leather book covers with a light coating of petroleum jelly or leather or vinyl dressing.

Source: NDSU Extension Service - <http://www.ag.ndsu.edu/disaster/flood/caringforimportantpapers.html>



Preparing to Evacuate Your Farm

▪ Safety Measures When Flooding is Expected

If you live in an area prone to flooding or if flooding has been anticipated for some time, have an emergency plan for evacuation. It should include such considerations as family safety, equipment safety, livestock relocation and temporary milking facilities.

When flooding is hours or minutes away, keep your priorities straight. Ensure your family's safety first. Be certain you have enough time to get to higher ground before access is cut off. If you have time before receiving an evacuation order, a number of precautions may help you protect your property and livestock.

▪ Long-range Preparation

- Take these precautions if flooding is common to your area or anticipated this season:
 - Create an emergency plan of action, considering such things as areas of high ground for animal relocation, temporary milking facilities and approval to use them, equipment relocation and safe pesticide storage.
 - Be sure cattle are properly immunized before being exposed to floodwaters.
 - Arrange or be aware of standby services for emergency milk pick-up.
 - Have a plan for moving grain out of reach of floodwaters.
 - Provide riprap on banks of earthen manure storages where flowing water may erode berms.

▪ Short-term Preparation

- If time is available, take the following precautions:
 - Move machinery, feed, grain, pesticides and herbicides to a higher elevation. If you have a two-story barn, the upper level makes a good temporary storage facility.
 - Open gates so livestock can escape high water.

- If water is rising, try to drive stock through water free of obstructions.
- Grazing animals swim well, but the greatest problem for them are fences and other obstacles. Long swims through calm water are safer than short swims through a swift current.
- Leave building doors and windows open at least 2 inches to equalize pressure and help prevent buildings from shifting.
- If possible, move motors and portable electric equipment to a dry location.
- Disconnect electric power to all buildings which may be flooded. If in doubt about how to disconnect power, call your utility company.
- Tie down lumber, logs, irrigation pipes, fuel tanks and other loose equipment or material. Secondary containment is another possibility for fuel tanks, as well as pesticide storage.
- To keep surface water out of your well, use materials such as heavy plastic and duct tape to seal the well cap and top of the well casing.

Source: NDSU Extension Service - <http://www.ag.ndsu.edu/disaster/flood/preparingtoevacuateyourfarm.html>



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Steps to Reduce Flood and Water Damage

Many things can be done before the snow melts or before a heavy rainstorm to reduce damage to home and property. This checklist can help you prepare to reduce the severity of water or a flood on your home and family.

■ Check your sump pump.

Clean the sump pump and pit and test the pump by pouring water into the pit. Consider having a spare submersible portable sump pump. Make sure the discharge hose delivers the water several feet away from the house to a well-drained area that slopes away from the house. If the hose outlet is too close to the house foundation or on flat ground, the water may simply recycle down through the house drain tile. Don't run sump pump water into a rural septic system because the water may saturate the drain field. In cities, running sump pump water into the sanitary system may overload the system and cause sewage backup; plus it may be illegal.

■ Move valuables to higher locations.

Get items such as irreplaceable family photo albums, high school yearbooks, personal videotapes, tax records, insurance policies, and household inventories off the bottom shelves in the lower level of your home.

■ Plug basement floor drains with removable grids.

A flexible rubber ball about 1¼ times the inside diameter of the pipe can be wedged into the drain to create a tight seal. The pressure might be quite high so brace the ball securely with a 2X4 against the ceiling. Hold a board or piece of plywood on the ceiling and slide the 2X4 against the bottom of the board to avoid damage to plaster ceilings. For a suspended tile ceiling, remove ceiling tiles to get access to the ceiling joists. Span a 2X4 across the two joists and wedge the vertical 2X4 between it and the ball. Some hardware stores sell a plug that has a rubber center that expands to fill the pipe when the top and bottom metal plates are squeezed.

- **Cover basement floor drains with permanent grids.**

Place a partially inflated inner tube around the drain, and top it with a square or two of plywood (not particle board). The plywood must be larger across than the inner tube to cover it. Brace this in place just as with the ball on the drain. Be prepared for some seepage.

- **Reduce flooding from other drains.**

Unbolt toilets from the floor and plug the outlet pipe using the same procedure as for floor drains. Shower drains can be plugged this way too. Most washing machines and basement sinks have their drain connections about 3 feet above the floor so may not overflow if the water doesn't get that high. If necessary, these drains can be disconnected and capped or plugged with braced rubber balls.

- **Move snow away from the house's foundation.**

If the ground is sloped 1 inch per foot near the house, moving snow just 3 to 5 feet from the house will reduce problems.

- **Keep water out of window wells.**

Since windows can't withstand much pressure, build dams and contour the ground so water will naturally drain away from the house.

- **Get downspouts down in place.**

Make sure downspout extensions are in the down position or use flexible tubing so that as snow melts they can carry the water away from the house. Using salt or a chemical to melt them free will probably damage the lawn.

- **Prepare appliances for flooding.**

Shut off appliances at the fuse box or breaker panel. Put freezers, washer, dryers, and other appliances up on wood or cement blocks to keep the motors above the water level. If high water is imminent and large appliances can't be moved, wrap them in polyethylene film, tying the film in place with cord or rope. The water will still get in, but most of the silt won't so cleanup will be easier.

- **Shut off electricity to areas of the home that might flood.**

Even if floodwaters are not reaching electrical outlets, the risk of electrical shock

to someone working in a flooded basement is high with electric motors in the furnace, freezer, washer, dryer, and other appliances. Shut off electrical breakers or unscrew fuses. Don't stand in water and turn off electrical switches. If this must be done, use a dry piece of wood or a plastic or rubber pole to do the switching, and stand on a block of wood or a plastic crate that doesn't conduct electricity. If floodwaters are getting close to the electrical entrance box, call the power supplier and have the electrical supply to the house disconnected. If the floor is damp but not really flooded, ground fault circuit interrupters reduce the risk of using electricity. In newer homes, interrupters can be identified by the buttons

between the top and bottom outlets. They can be added to any outlet or in an extension cord to turn off the power if there's danger of water.

- **Move hazardous materials to higher locations.**

This includes paint, oil, cleaning supplies, and other dangerous materials.

- **Plan for pets.**

Pets aren't allowed in shelters due to health regulations. If left behind, stressed pets can damage your house, and their safety is at stake too.

- **Assemble supplies in case the electricity goes off.**

Gather water, food that requires no refrigeration or cooking, a non-electric can opener, a battery-powered radio and flashlight, and extra batteries.

- **Assemble supplies for a possible evacuation.**

Gather water, nonperishable food, paper plates/cups and plastic utensils, extra clothing and shoes, blankets or sleeping bags, a first aid kit and prescription medications, cash and credit cards, important phone numbers, and special items for babies and the elderly.

- **Discuss what to do in case of a flood.**

Plan and practice an evacuation route. Plan a route if certain roads or streets are known to flood easily. Where would you go if your home flooded: a local shelter, a family member, or friend's house?

- **Ask an out-of-state family member or friend to be your family contact.**

If family members get separated during an evacuation, each should get in touch with that contact. Make sure everyone has the contact's phone numbers.

- **Discuss safe emergency procedures.**

Teach adults and older children where electric fuse boxes, water service mains, and natural gas mains are and how to turn them off if necessary.

- **Discuss the situation with children honestly and openly.**

Hiding the situation from children will probably be even more stressful.

Source: NDSU Extension Service - <http://www.ag.ndsu.edu/disaster/flood/stepsreducehomeflooddamage.html>



Avoiding Groundwater Damage to Homes

■ Remedies for Homeowners

Groundwater flooding can cause many problems for homeowners. Structural damage, sewer system back-ups, and damaged appliances are three of the most distressing consequences. Fortunately, there are some remedies. They vary in scope, expense, and results, just as homeowners vary in their expectations and resources.

■ Consider Your Resources

Sound advice should be your first priority when groundwater flooding is a problem. Expertise can come from a variety of sources. Local resources include your local emergency government office, building inspectors, insurance agents (if you have appropriate insurance), county extension agents, and the Home Builders Association. All have access to technical assistance, publications, and possible sources of financial aid.

Financial assistance may be available through your local emergency government office. This may also include temporary housing and crisis counseling.

Grants and low-interest loans may be available in cases of regional disasters. Check with your insurance agent to determine whether your homeowner's insurance covers any of the damages. Groundwater, surface water, and floodwater damages usually are not covered by homeowner's insurance. Your agent may have a rider available for groundwater flooding. Homes located in floodplains subject to surface water flooding are eligible for federal flood insurance.

Contractors can help you determine the nature and extent of your damages and what remediation options are appropriate for your situation.

A waterproofing contractor may be able to correct the problem if you simply need to stop minor nuisance flooding.

A general contractor may be necessary if you have damages to your home and need more substantial repairs and corrective measures.

General contractors can arrange for the services of various specialists.

■ Your Options

The severity and frequency of groundwater flooding will in part dictate the best solution. The following options parallel increasing severity of groundwater flooding:

Raising appliances, furniture and fixtures. In cases where groundwater flooding is a minor nuisance that amounts to little more than wet walls and small streams across the basement floor to a drain, solutions may include:

Raising or blocking up appliances, furniture, and other items that may be damaged by direct contact with the water for an extended time.

Installing a false floor over the basement slab. This allows water to drain under the false floor to a drain or sump.

Installing a surface drainage system around the perimeter of the basement floor. This method channels water from the walls to a drain or sump for removal.

Relieving water pressure against walls and the floor. Some form of drainage is necessary when cracks occur because of water pressure.

If the basement or foundation does not already have drain tile installed, consider an excavation of the home exterior to allow for waterproofing of the walls and the installation of washed stone (gravel) and drain tile. Drain tile can divert water away from the house if there is a slope, or accommodate a sump pump system as noted below.

Internal drainage is another option if excavation is not possible or convenient. Washed stone and drain tile are installed around the interior perimeter of the basement footing. This requires subfloor installation and trenching.

Sump pumps are a necessary part of the internal drainage system unless the interior tile can be connected to exterior tile that will drain away from the house. Similarly, sump pumps may be a necessary part of external drain tile systems if water does not drain away from the house naturally.

Filling the basement. This option can eliminate the groundwater problem, but the trade-off is the loss of a full basement. If the groundwater level in a basement is only one or two feet, one option is to pour a new floor in at a higher level, leaving a crawl space in the basement. The original floor needs to be broken first, so that water pressure can be relieved. Fill dirt is

brought in and the new floor poured. Drainage under the new floor also is

recommended. In more severe cases, the basement may have to be completely abandoned.

Rebuilding septic systems and wells. If septic systems and wells have been compromised, the systems should be rebuilt following modern guidelines for high groundwater areas. There may be added expenses related to closing or removing portions of existing systems that have failed.

Raising or relocating the house. This is the most expensive option. It is the best long-term solution when the building integrity is threatened and utilities must be shut off. In some cases, it may be the only reasonable option to avoid property damages and lower property values.

■ **Additional Resources:**

Your county extension office, your local emergency management office, building inspectors, insurance agents (if you have appropriate insurance), the Home Builders Association, and the Federal Emergency Management Agency.

■ **Related publications:**

UW-Extension publications

- "Removing Ground Water From a Basement of an Existing Home," December 1993;
- "Hiring a Contractor After a Natural Disaster," December 1993.

"Repairing Your Flooded Home," the American Red Cross/Federal Emergency Management Agency, 1992.

"Retrofitting Flood-Prone Residential Structures," Federal Emergency Management Agency, 1986.

Source: NDSU Extension Service - <http://www.ag.ndsu.edu/disaster/flood/avoidgroundwaterdamage.html>

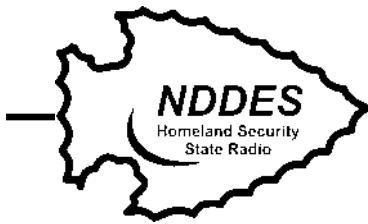


Basements May Flood if Drainage is Poor

During extreme flooding, water pressure can collapse foundation walls. In some cases it might be preferable to allow the basement to flood and equalize water pressure. To avoid flood problems in the future, home owners can take several steps to improve drainage around the house:

- Get professional advice before starting a major grading project.
- Build small diversions or ditches to channel water away from your lot. Various regulations concerning water flow will apply and you must not change the flow in a way that adversely affects your neighbor. Before beginning a project, check with your neighbors and local officials.
- Use surface inlets to carry water to a surface drain. The drain outlet can empty into street gutters or storm sewers if permitted by local building codes.
- Grade your yard so that surface water drains away from the house. Often the fill used around a house settles and leaves a low area. This low spot must be filled so water runs away from the house. In the first 10 feet away from the house, the soil should drop a minimum of 6 inches. A minimum grade of 1 foot in 1000 feet generally is adequate after the first 10 feet.
- To prevent wood rot, there must be at least eight inches between the soil and the wood siding. The soil directly around the house should be of slow permeability so water does not penetrate near the house. Rock and gravel should not be used on the surface, since they will serve as a conduit for water into the ground.
- Install roof gutters and downspouts to carry water away from the house. Thousands of gallons of water will fall on the roof during a heavy rain and must be removed quickly from the area around the house. Downspouts can empty into a subsurface drain or be discharged over a grassy area.
- Water from downspouts that empty onto the lawn must be dumped and spread far enough from the house so the water does not enter the basement. On steeply sloping well-drained lawns with no basement water problems, a simple splash block usually will be sufficient. For houses with basement water problems, the water should be dumped at least 5 to 10 feet from the house.

Source: Iowa State University - <http://www.extension.iastate.edu/disasterrecovery/info/basementdrainage.htm>



Reduce Flooding from Drains

- **If the grid over a basement floor drain can be removed, use a rubber ball to plug the drain.**

A flexible ball about 1 ¼ times the inside diameter of the pipe can be wedged into the drain to create a tight seal. The pressure might be quite high if water or sewage tries to come up so brace the ball securely with a 2X4 against the ceiling. Hold a board or piece of plywood on the ceiling and slide the 2X4 against the bottom of the board to avoid damage to plaster ceilings. For a suspended tile ceiling, remove a ceiling tile or two to get access to the ceiling joists. Span a piece of 2X4 across the two joists and wedge the vertical 2X4 between it and the ball. Some hardware stores sell a plug that has a rubber center that expands to fill the pipe when the top and bottom metal plates are squeezed.

- **If the grid over the floor drain is permanent, a partially inflated inner tube can be placed around the drain.**

Place a square or two of plywood (not particle board) on top of the inner tube. The plywood must be larger across than the inner tube to cover it. Brace this in place just as with the ball on the drain. Be prepared for some seepage.

- **Reduce flooding from other drains.**

Unbolt toilets from the floor and plug the outlet pipe using the same procedure as for floor drains. Shower drains can be plugged this way too. Most washing machines and basement sinks have their drain connections about three feet above the floor so may not overflow if the water doesn't get that high. If necessary, these drains can be disconnected and capped or plugged with braced rubber balls.

Source: NDSU Extension Service - <http://www.ag.ndsu.edu/disaster/flood/floodingfromdrains.html>



Septic Systems and Flooding

Flooding can cause problems at homes with individual septic systems. If drains in the house run slowly or are backing up, pumping the septic tank will provide at best three or four days of reprieve but the problem will return. Pumping the tank is a dangerous and potentially costly mistake because it can cause considerable damage to the system.

An individual home septic system has two main components:

- A septic tank which holds about three to four days of normal water use from the house and traps solid waste.
- A drainfield which infiltrates the waste water into the ground.

If your drainfield area is flooded or very saturated you might notice some problems:

- drains in the house will run slow
- toilets drain slowly or sound strange when flushed
- water may back up into floor drains in the basement

When these problems occur, generally the septic tank is blamed. In reality, these problems are usually caused by the flooded or saturated drain field. Often the water can't flow out of the septic tank to the drainfield because of the flooded or saturated conditions, so the water backs up into the septic tank, which fills up, causing the water to back up into the house and ultimately into the floor drains.

Under flooded or saturated drain field conditions, do NOT have the septic tank pumped!

At best, pumping the tank is only a temporary solution. Under worst conditions, pumping it out could cause the tank to try to float out of the ground and damage the inlet and outlet pipes.

The best solution is to plug all drains in the basement and drastically reduce water use in the house. Some suggested ways:

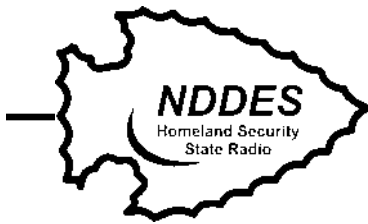
- First make sure there are no leaking fixtures in the house. Check faucets, shower heads, toilets, sinks and any other water-using devices for leaks and repair them as soon as possible. Even a drop of water every 15 seconds can

add up to a lot of additional water in the septic system.

- Don't put water from a basement sump pump into the septic system.
- Don't let water from roof gutters or the sump pump discharge into the drain field area.
- Reduce the number of times you flush the toilet. A good rule might be one flush per person per day.
- Reduce the number of showers or baths. A good rule might be one bath or shower every other day per person.
- Don't use the dishwasher or garbage disposal.
- Don't do laundry, or take it to a laundromat if possible.

Common sense is the key to reducing water use in the house. Remember, the drainfield was designed to infiltrate the amount of water normally discharged from the house. When additional water from rain, snow, or flooding is added to the drainfield, its ability to handle household water becomes seriously limited.

Source: NDSU Extension Service – Tom Scherer, Agricultural Engineer - <http://www.ag.ndsu.edu/disaster/flood/septicssystemflood.html>



Sump Pump Questions

For many homeowners the first line of defense against water in the basement is a sump with a pump in it. The sump may be connected to drain tile that drains the footings of the house, under the entire basement, or just the area where the sump is located. Many houses have tiling installed only around a portion of the house. The water that drains into the sump must be removed, and this is accomplished with a sump pump.

The two basic sump pump models are the up-right (commonly called a pedestal) and the submersible. Either will work well with proper maintenance.

The pedestal pump has the motor on top of the pedestal and the pump at the base, which sits on the bottom of the sump. The motor is not meant to get wet. The pump is turned on and off by a ball float. One advantage of this type of pump is that the on/off switch is visible so the action of the ball float can be easily seen. Submersible pumps are designed to be submerged in water and sit on the bottom of the sump. The on/off switch is attached to the pump and can be either a ball float connected to an internal pressure switch or a sealed, adjustable, mercury-activated float switch. The sealed mercury switch is generally more reliable than the pressure switch.

Either type of pump should have a check valve on the water outlet pipe so water doesn't flow back in the sump when the pump shuts off. Water flowing back and forth can cause the pump to turn on and off more frequently than necessary and decrease the life of the pump.

■ Some frequently asked questions about sump pumps:

Q. How do you check or test a sump pump?

A. First, make sure the outlet pipe is not frozen shut or plugged and that it directs water away from the house. Next make sure the pump is plugged in. Remove the lid (if the sump has one) and use a flashlight to check if the sump is clean and that the pump inlet is not plugged. Then slowly pour about 5 gallons of water into the sump. Try to simulate the speed that water would normally flow into the sump. Watch the action of the on/off switch and listen to the pump. Make the pump turn on and off at least twice. If something doesn't work right, fix it as soon as possible.

Q. Can you burn the pump out if the outdoor pipe is frozen shut, or will it

automatically shut off?

A. Most pumps will not burn up, but they can overheat if left in this condition. Almost all sump pump motors have thermal protection built in. If they do overheat you just have to shut them off and let them cool down. The thermal relay will reset.

Q. What size pump should I have for my house?

A. There is no "correct" size. The horsepower requirement for a house is determined by the area of drainage connected to the sump, the depth to groundwater, the depth of the basement, and many other factors. A 1/3 hp pump is satisfactory for most houses.

Q. Are there any problems with replacing a 1/3 hp pump with a 1/2 hp pump?

A. When used in similar conditions, a 1/2 hp pump will pump more water and lift it higher than a 1/3 hp pump. Most new sump pumps will have a chart or graph in the instructions or on the box that shows the flow versus height of lift for both sizes. The flow is usually given in either gallons per minute or gallons per hour (multiply gpm by 60 to convert to gph). The height of lift is given in feet of vertical lift. There shouldn't be any problem, but where the flow into the sump is relatively slow there would be no advantage to using the larger pump. However, in situations where water flow can become rapid, a 1/2 hp pump may be able to keep up with the flow where a 1/3 hp pump may not.

Q. Do sump pumps have filters which need to be cleaned or replaced?

A. Sump pumps do not have filters, but they do have screens or small openings where the water enters the pump. These can sometimes be plugged.

Q. Can or should you pump into a sewer drain or basement floor drain?

A. No, you should not. If you have a septic system, under no circumstances should the sump be pumped into the basement floor drain. During wet conditions the drainfield of the septic system is usually saturated and struggling to handle the normal flow of water from the house. Adding to it with a sump pump can damage the septic system. Even if you are connected to a public system the sump should not be pumped into a floor drain. Putting additional water into the sewer system can overload the public system, and there may be a regulation against pumping into it.

Q. Where should the sump pump drain hose be run?

A. Preferably, sump water should be discharged at least 20 feet away from the house in such a way that it drains away from the house. It should not be directed onto a neighbor's lot, into window wells, or onto a septic system drainfield.

Q. Can the average person replace a defective sump pump or does it require

specialized tools or the expertise of a plumber?

A. Almost all sump pumps come with a list of required tools and directions for installation. It should not be difficult for the "average" person to replace a sump pump.

Q. How big should the sump hole be? What kind of hole liner should you use? How much gravel do you put under and around it?

A. Sump holes should be about 2 feet in diameter. This allows space for the pump and associated piping and to store water between pumping events (about 15 to 25 gallons). Metal or plastic liners can be used, but plastic is easier to work with and is the material of choice. When the sump liner is installed, about 3 to 4 inches of coarse gravel should be placed in the bottom of the hole. The gravel forms a solid base for the pump as well as helping to prevent mud and other debris from clogging the pump.

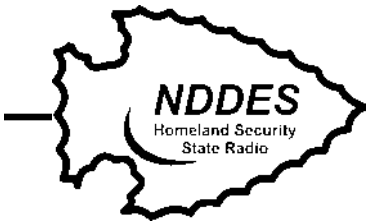
Q. Should the sump pump be on an isolated electrical circuit?

A. A standard 15-amp, three-prong grounded outlet is sufficient to handle a sump pump. A sump pump is always in or near water, so it is best to have an outlet with a ground fault interrupter (GFI).

Q. I don't have a sump in my basement but am concerned about water leaking in. What can I do?

A. You can push the water to the floor drain, but if water backs up in the floor drain or drains very slowly a pump is needed. Small pumps sometimes referred to as "skimmer" pumps are designed to sit on a flat surface and pump when water on the floor is only 1/4 to 1/2 inch deep. They can often be used with a common garden hose. A 50-foot garden hose run out through a basement window will usually carry the water far enough away from the house. You can remove more water by taking the cover off the floor drain and placing the pump in the drain bowl -- these pumps are usually small enough to fit in the bowl. In emergencies where electric service is off, these pumps can be powered by a small gasoline generator.

Source: NDSU Extension Service – Tom Scherer, Agricultural Engineer - <http://www.ag.ndsu.edu/disaster/flood/sumppumpquest.html>



Flooded Farm Vehicles and Equipment

■ Tips on Cleaning and Reconditioning

Try to clean tractors, trucks and farm equipment as soon as possible. Delay will make dirt and silt harder to remove and may cause considerable rusting and corrosion. If you use farm vehicles and equipment before proper reconditioning, you may seriously damage them.

Have your dealer or another expert recondition engines. They need to be completely disassembled for cleaning and reconditioning. Do not try to move or start an engine that has been submerged until it has been cleaned and reconditioned, since dirt will damage bearings and precision parts. If the tractor was submerged only to the platform, you will need to service only the wheel bearings and moving parts that were under water.

■ Emergency Cleaning

If you must use the tractor or engine immediately or if you think the cost of professional reconditioning is not worthwhile, use the following procedure. This procedure isn't thorough enough to prevent possible damage or need for overhaul in the future.

~~////~~ Clean exterior thoroughly with a hose. Scrub greasy deposits with ~~////~~ solvent.

~~////~~ Remove spark plugs or fuel injectors, air cleaner, intake manifold ~~////~~ and carburetor.

~~////~~ Clean these parts thoroughly with solvent.

~~////~~ Drain the crankcase. Flush the crankcase with oil and refill with ~~////~~ clean oil.

~~////~~ Disconnect fuel lines, blowing them out with compressed air.

~~////~~ Crank the engine slowly with spark plugs or fuel injectors removed ~~////~~ to force water out of cylinders. Squirt light lubricating oil into each ~~////~~ cylinder and let it stand for about five minutes. Then crank the ~~////~~ engine slowly to lubricate cylinder walls and rings.

~~////~~ Replace all filters -- engine, fuel, hydraulic.

Remove completely flush out the fuel system -- tank, pump, lines -- with #1 diesel fuel. Be extremely careful to avoid fire danger.

Replace starter and generator. Have an expert service them.

Drain and flush the transmission and final drive with solvent. Refill with new, clean oil.

■ Wheel Bearings, Cooling Systems and Batteries

Remove and clean unsealed wheel and track bearings with solvent. Lubricate and replace the bearings. Factory-sealed bearings should not need cleaning if the seal is unbroken.

Flush the cooling systems with fresh water, and clean the radiator fins.

Replace the battery, if necessary. If it was submerged, it will probably need to be replaced.

■ Starting and Initial Operation

Examine the machine and turn it over by hand after you have cleaned and replaced all parts. If it turns freely, it is probably ready for operation. Turn on the engine and operate the machine at low speed until you are sure all parts are working smoothly.

If there is a substantial amount of dirt in the crankcase, transmission or gear train, change the oil and oil filter after operating the machine for a few hours. Using fresh lubricant is cheaper than paying for additional repairs.

■ Additional Steps for Trucks and Cars

Remove inside door panels. Clean and lubricate latches and window raising mechanisms.

Remove seats and floor mats. Brush and vacuum thoroughly. Clean washable surfaces with soap and water. Use rug or upholstery shampoo on non-washable areas. Dry thoroughly.

Disassemble leaf springs. Clean or replace spring pads if necessary.

Have brakes and steering mechanism checked before you drive the vehicle.

■ Reconditioning Farm Implements

Follow applicable steps above, and clean rest of machine as follows:

- **Chains.** Soak chains in solvent for several hours, then remove chains and allow solvent to drain out of them. Soak chains for several hours in light oil, then drain off excess oil and replace chains on machine.
- **Gears and sprockets.** Clean exposed gears and sprockets with cleaning solvent. Coat gears with light oil.
- **Gear cases.** Inspect enclosed gear cases for water or grit. Water may be present below the oil. If you find water or grit, or if you are in doubt, drain the case, flush it with solvent and refill with clean oil.
- **Belts.** Examine all belts for tears or cracks. Repair or replace them as necessary.
- **Cutting parts.** Remove knives and cutter bars from mowers and combines. Clean and dry them. Coat cutter parts with light oil and reassemble. Inspect the insides of combines and remove accumulated dirt, chaff, debris or water.
- **Soil-working tools.** Clean dirt and rust from surfaces of soil-working tools such as mold boards, discs and cultivator shovels. Coat these tools with rust preventive grease or used crankcase oil.

Source: NDSU Extension Service - <http://www.ag.ndsu.edu/disaster/flood/floodedfarmvehiclesandequipment.html>



■ **How To Make Temporary Structural Repairs**

There's more to worry about than broken windows and leaking roofs when inspecting a house for flood damage. You have to make sure there's no live power in or around a house. Make doubly sure that main breakers at the service entrance are off. If you're in doubt, wait for the power company to come check it out.

Any temporary structural repairs that can be made will require some creativity since there's likely to be a shortage of materials. The most common repairs will involve nailing plywood or taping heavy plastic to broken windows, ceilings and walls.

■ **Tips**

- Check for structural damage to make sure the building is not in danger of collapsing.
- Turn off any outside gas lines at the meter or tank and let the house air for several minutes to remove foul odors or escaping gas. If you must enter at night, carry a battery-operated flashlight. Don't use a flame as a light source. Do not smoke.
- Shovel out mud while it's still moist to give walls and floors a chance to dry.
- Once plastered walls have dried, brush off loose dirt. Wash with mild soap and rinse with clean water; always start at the bottom and work up. Ceilings are done last.
- It's also important to clean out heating and plumbing systems.
- Clean metal at once, then wipe with a kerosene-soaked cloth. A light coat of oil will prevent iron from rusting.
- Flooded basements should be drained and cleaned as soon as possible. However, structural damage can occur by pumping out the water too quickly. After the floodwater around your property has subsided, begin draining the basement in stages, about one third of the water volume each day.
- If the building has shifted or the floors have settled badly, it may be necessary to install temporary bracing until extensive work can be done.
- To prevent flooded wooden floors from buckling and warping further, drive nails where the floor tends to lift or bulge.
- Remove loose plaster.
- After house is completely dry, repair damaged plaster on walls and ceilings. Badly damaged plaster walls can be resurfaced with gypsum board or plywood.



Protecting Livestock During a Flood

■ Guidelines for Safe Shelter and Evacuation

Unconfined livestock can usually take care of themselves during floods. Do not let them become trapped in low-lying pens. A number of safety precautions, as outlined below, can be taken for animals housed in barns during a flood. Above all, be sure animals are evacuated before floodwaters enter barns and other enclosed livestock areas. Animals sometimes refuse to leave during a rapid rise of water and may drown.

■ Keeping Livestock High and Dry

In broad, level flood plains where floodwaters are seldom deeper than 3 or 4 feet, you may need to construct mounds of soil on which livestock can stay until floodwaters recede. Try to locate the mounds where they will not be washed away by fast-flowing water.

■ Think Essentials, Safety in Barns

Provide feed and water. Water is essential. Thirsty animals will try to break out to get to floodwaters. If clean water is in short supply, limit feed intake.

If animals are housed with machinery, fasten bales of straw in front of sharp edges and protruding parts such as cutter bars or crank handles. (Do not use hay, because animals will eat it.) Try to cover wooden paddle wheels on combines or choppers, since these parts can be dangerous.

Block off narrow passageways where animals would be unable to turn around. A few heavy animals in a narrow dead end can be dangerous both to themselves and the building.

Be absolutely certain that herbicides, pesticides and treated seeds are not even remotely accessible to livestock, and are stored where floodwater will not contaminate livestock feed or water.

Turn off electricity at the main switch. Livestock could damage electric fixtures, causing fires, or electrocutions.

If there is a possibility that dairy barns may become inundated, drive cattle out of the barn. During rapid rise of water, cattle often refuse to leave the barn and may drown inside if the water rises high enough. For this reason, begin evacuation measures before flood waters reach your location.

Source: NDSU Extension Service -
<http://www.ag.ndsu.edu/disaster/flood/protectinglivestockduringaflood.html>



Pets and Emergencies

If you evacuate, the best way to protect your pets is to evacuate them, too. Leaving pets behind, even if you try to create a safe place for them, is likely to result in them being injured, lost or worse.

■ **Have a safe place to take your pets**

Red Cross disaster shelters cannot accept pets because of state regulations and other considerations. Service animals that assist people with disabilities are the only animals allowed in Red Cross shelters.

- Keep a list of pet friendly places, including phone numbers.
- Ask if no pet policies could be waived in an emergency at hotels or motels or a friend's apartment complex.
- Ask relatives, friends or others outside the affected area whether they could shelter your animals in their homes.
- Bring all pets into the house when an emergency begins so that you won't have to search for them if you have to leave in a hurry.
- Make sure all dogs and cats are wearing collars and securely fastened, up-to-date identification.

Birds should be transported in a secure travel carrier. Provide a few slices of fresh fruits and vegetables with high water content. Have a photo for identification and leg bands. Bring plenty of paper towels to collect waste in the bottom of the birds cage.

Snakes can be transported in a pillowcase but they must be transferred to more secure housing when they reach the evacuation site. Take a water bowl large enough for soaking as well as a heating pad.

When transporting **house lizards**, follow the same directions given above for birds.

Small mammals (hamsters, gerbils, etc.) should be transported in secure carriers. Take bedding materials, food bowls and water bottles.

Source: <http://www.cityoffargo.com/Emergencies/AreYouPrepared/Pets/>



A Flood of Emotions

Water causes more than property damage in North Dakota. It is bringing a flood of emotions. How we deal with the emotional flood may affect how well North Dakotans recover from this natural disaster.

■ Emotional Responses

Most people are very quick to take care of what needs to be done: sandbagging, packing, and helping neighbors. "Let's take care of what can be done." At the same time people experience disbelief: "This can't possibly be happening!" This emotional duality allows people to keep working for survival. But there may be a sense of unreality during the disaster.

Other powerful feelings may surface:

- Panic/feeling out of control
- Anger
- Generosity toward others
- Despair
- Anxiety/uncertainty
- Disorientation
- Cooperation/teamwork

At times, flood preparations can pull whole neighborhoods together by working, sandbagging, and preparing. There is a sense of teamwork. It can be an experience that helps people get to know each other in a special way.

The full force of the emotional flood will hit after the floodwaters recede. That's when exhaustion sets in. As people look at their real losses, they may experience grief, desperation, and depression. People need to be prepared to pay more attention to their emotional reactions and to the reactions of friends and neighbors once the emergency crews go home.

■ Coping

One of first things people can do is pull together and don't hesitate to ask for assistance! Many people are around who want to help and will help. They just need to know what to do that will be most helpful right now.

Another important coping strategy is taking care of your physical and emotional needs. Eat a balanced diet to fuel your energy. As much as possible, get enough sleep. Fatigue will slow you down during an emergency. As you prepare, pack,

sandbag or check your crops, talk with others about your feelings. Listen to theirs. Together, look for the positives in the situation.

■ Talking Can Ease The Pain

Floodwaters will subside, but the emotional stress may keep rising for people who have experienced losses. Pain from loss and tough times can be eased when people keep talking with each other. Friends and neighbors, parents and children, and couples need to talk about what they are feeling.

When people stop talking with others who have suffered loss or who are facing financial trouble, they send the message that they don't care. Rather than feeling indifference, friends and neighbors may be caught up in their own losses, uncertainties, and problems. Those who were not hurt directly by the floods may feel guilty and not know what to say.

Children especially need help in regaining a sense of security. They may see changes in their parents and think that they are somehow to blame for increased tension. Talking together and being honest yet reassuring about problems the family faces can help children feel more in control.

If money is tight, parents can ask children to help think of ways the family can work together to keep expenses down. Parents need to be sure children don't blame themselves for tough economic times.

Couples who are facing losses may find that each spouse copes differently with the stress. No one reaction is right. The important thing is to keep talking things over and to show love and affection toward each other.

What matters most as people put their lives back together is friends, neighbors and families making themselves available for each other.

It can be harder to be a good listener than to provide the immediate kinds of help that have brought neighbors and strangers together in the crisis. Keeping in touch with the people who are hurting doesn't mean you have to have the answers. Just giving someone a chance to talk about the problem can be an important step in rebuilding.

■ Helping Others

As much as possible, provide practical help during the flooding. Help friends or family pack. Furnish meals. Store their belongings; provide them with a place to stay. Parents may be very busy; offer to spend some time with children to play and to listen to their concerns.

Listen. When others talk about their experiences and feelings, their emotional load seems lighter to bear. One of the best ways you can help is to just listen. You don't have to come up with solutions or answers. It's OK if your neighbor needs to break down and cry. Others will ask, "Why me?" They are not really looking for an answer but expressing their hurt.

Show by words and actions that you care. A friendly arm around troubled shoulders or a few words of support and encouragement can help in times of crisis. Small, kind deeds and sincere expressions of affection or admiration also will mean a lot.

■ **How Family Members Can Be More Supportive of One Another**

Tell family members when they have done a good job. Laugh! Laughter can help relieve tension. Be considerate of other family members. Express love and concern often.

■ **Neighboring in Times of Trouble**

Offer specific types of help or ask how you can help.

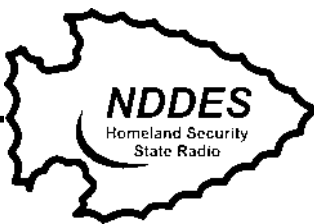
Go ahead and act. Don't be afraid of saying or doing the wrong thing.

Go ahead and help. Your friend won't resent you if you aren't facing flood danger yourself.

Keep helping. The danger may continue for some time. Recovering may take even longer. Your friends or family members will need regular, small acts of kindness to maintain their morale and to put their lives back together.

For emotional support, contact the Mental Health Association in North Dakota through the 24-hour statewide HELP-LINE at 211.

Source: NDSU Extension Service - <http://www.ag.ndsu.edu/disaster/flood/floodofemotions.html>



Ensuring a safe and secure homeland for all North Dakotans

■ Helping Children Through the Flood

Floodwaters bring with them a sense of emergency and fear that can severely disrupt the lives of children and their families. Young children are particularly at risk during these times because of their deep sense of vulnerability, their lack of understanding and their difficulty in communicating how they feel. Older children are affected too. Like their younger siblings, they might find it difficult to express their feelings. They may be terribly frightened of the implications of the adversity on their future. Here are a few suggestions for helping children through these difficult times.

■ Make time for your children.

The tremendous stress of adversity can be terribly distracting for adults. Who has time to comfort a child when the floodwater is rising and the basement filling with water? Just a moment of your time, a gentle hug or a reassuring word may be all children need to feel more safe and secure in an emotional situation.

■ Speak simply and honestly about the situation.

Take a few moments to explain to your children what is happening to your family. Use simple words they can understand. Be honest. With a preschool child use words like, "*Jenny, we have to leave our home for a while because the water is getting higher and higher and is going to come into our house. So we cannot stay. We are going to Aunt Mary's house for a while.*" Do not sugar coat a grim situation. Do not exaggerate. Keep children informed of a problem that will directly affect them.

■ Maintain rituals of comfort.

Dinnertime at the kitchen table, a bedtime story, an afternoon nap, or a favorite teddy at bedtime provide young children with a sense of security. Older children have their own rituals too. Watching TV in the afternoon or visiting with friends provides a similar sense of stability. Crisis activity and relocation can cause severe stress with any person because of the disruption of the familiar. Identify these rituals of comfort for children and do what you can to maintain them during disruptive times.

■ Reassure children about the family's safety.

Because they find it difficult to understand complex situations, young children can easily exaggerate their normal fear of being separated from their parents. Reassure children with statements like, "*Maria, yes, the water is dangerous. But*

you and Mommy and Daddy and your little brother will be safe. The Red Cross will find us a safe place to stay until the water goes back down."

Talk with children about how you feel and suggest a positive response. Say something like, *"Mommy feels very sad about leaving home. Very sad. That is why I am crying. I could use a hug."* Giving children something to do makes them feel a part of the family response to the adversity.

- **Put words of acceptance to your children's feelings and experiences.**

Say something similar to, *"It's okay to cry, Tommy. Taffy (the family pet) will come back to our house when we return too. She will be fine at Uncle John's. He will take very good care of her."* You do not have to "fix" how the child feels. Be a good listener and supporter.

- **Look for masking behavior.**

Children, especially young children, will express how they feel through their actions. Nightmares, physical aggression, bed wetting, stomach distress, and increased clinging and crying are signs of stress. Older children can have difficulty maintaining attention, have problems at school, become withdrawn or get into trouble. These actions are messages that a child is frightened and bewildered.

- **Give children something productive to do appropriate for their age.**

Make them a part of the family's effort to respond to the adversity. Helping make sandwiches or carrying water or filling a sandbag (at their pace) helps children feel a part of their family. Keep them involved in a safe way. Everyone at almost any age can have something productive to do during a crisis.

- **Show children models of courage and determination.**

Draw children's attention to those within and outside of the family who face the adversity. *"Daddy is doing all he can, Mary. He was up all night putting sandbags around the house. Our neighbors are doing the same. We are all working together."*

Take time to calm yourself.

Take a brief break from the crisis. Take a two-minute walk to cool off and calm down. Try for just a few moments to relax mentally. You will be able to provide more support to your family if you do.

■ **Seek professional support if needed.**

If your child is having difficulty adjusting then seek professional support. Severity and persistence are two significant concerns. If slight melancholy turns to deep depression or simple acting out turns to cruelty then intervention is needed. If relatively simple responses to stress endure over time then seek assistance.

Keeping children informed, supporting them emotionally and getting them involved in the family's response to the adversity will keep the family together as they struggle to manage a difficult situation. Pulling together through adversity will strengthen the family in ways that will last long after the crisis is resolved.

Source: NDSU Extension Service - <http://www.ag.ndsu.edu/disaster/flood/helpingyourchildrethroughtheflood.html>



■ **Flooding and hazardous materials do not mix**

Household or business chemicals that may be hazardous can be identified by container warning labels. Some typical warnings include: **DANGER-CAUTION-POISON-WARNING-FLAMMABLE-TOXIC-HAZARDOUS-KEEP OUT OF THE REACH OF CHILDREN-AVOID CONTACT WITH SKIN.**

Here is a list of some common hazardous products that might be found in homes and businesses:

Pesticides: rat poison, flea powder, insecticides

Weed killers

Fertilizers

Automotive products: antifreeze, batteries, gasoline, motor oil, wax

Used motor oil

Solvents: degreasers, spot removers

Paint, paint thinners, lacquer

Photography materials

Rust removers

Medication

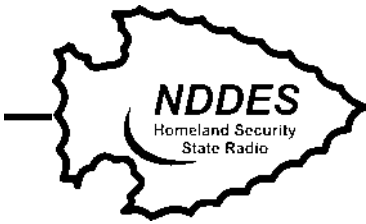
Pressure vessels: propane tanks, butane cylinders, aerosol cans

Cleaning supplies: oven cleaners, toilet cleaners, furniture polish, drain cleaners, silver polish, etc.

Fuel oil

Flammable liquids

Source: Environmental Protection Agency



Flooded Pesticides

Some formulations and containers of pesticides can survive flooding without harm and be saved for future use. Others are ruined when wet and must be properly disposed of to minimize their potential harm. Pesticides may have contaminated waters in flooded areas. Everyone concerned should take responsibility to prevent further contamination.

■ Salvage

Pesticides in unbroken, waterproof containers can usually be salvaged. Salvageable pesticides may include:

- Liquid concentrates in glass, metal, or plastic containers. If liquids have a milky appearance, water has probably leaked in, and the pesticide should be properly disposed of. Clear liquid concentrates are probably unharmed.
- Oil solutions such as livestock sprays designed for direct application without dilution, or oil based household sprays. Water can be readily seen in oil solutions. Separate the oil and water then return the spray to the original container.
- Pressurized cans or "bug bombs."
- Baits, powders, or granules in waterproof containers.

■ Labeling

Labels on salvaged containers will probably be loosened by floodwaters. Labels should be firmly refastened to the containers. Unlabeled pesticides are dangerous to the handler and the environment, since there is the possibility that they might not be used correctly. If there is any question about the contents of a container, set it aside for disposal.

■ Disposal

Dispose of any flooded pesticide dusts, wettable powders, or soluble powders packaged in paper or cardboard containers. If pesticides in these containers have become wet, chemical changes may occur, and the formulation may become hard and/or lumpy so that it cannot be properly suspended in water or used as a dust.

Use care when handling these containers, since they may be so weak and soggy that they will break when handled. Some pesticides may have unpredictable reactions in the presence of water. Properly dispose of any containers that can't be identified because of wet, illegible, or missing labels.

The recommended method for pesticide disposal is to preregister with the North Dakota Department of Agriculture to bring the pesticides to the next Project Safe Send collection program. Preregistration forms are available from the North Dakota Department of Agriculture or from NDSU Extension Service county offices. Call the North Dakota Department of Agriculture at (800)242-7535 for more information.

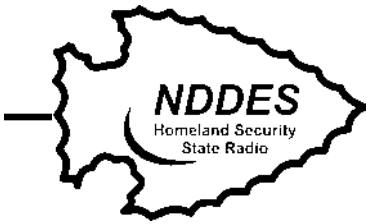
If unsure of the correct procedure for disposal, contact the regional EPA office, the state regulatory agency involved with pesticides, or the local Extension Service for directions and help in disposing of damaged pesticides.

■ **Safety**

Be aware of any illness arising after handling pesticides or pesticide wastes. Symptoms of pesticide poisoning frequently include headache, nausea, diarrhea, visual disturbances, excessive salivation or sweating, difficulty in breathing, weakness, tremor or convulsions.

Symptoms usually appear within 24 hours, although occasionally they may be delayed for several days. Consult the pesticide label or Material Safety Data Sheet (MSDS) for information regarding poisoning. See a doctor immediately or contact your local poison resource center if symptoms appear. Be sure to provide a copy of the label and/or MSDS to the doctor.

Source: NDSU Extension Service - <http://www.ag.ndsu.edu/disaster/flood/floodedpesticides.html>



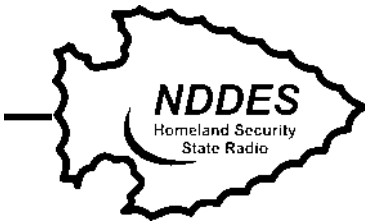
■ **IS HOME-FROZEN FOOD SAFE TO USE?**

If your home freezer has been covered with floodwater, there is a good chance that seepage damaged the food inside. This food should be discarded even if no flood waters covered the freezer or seeped inside. Some foods may be unsafe due to power outage. The amount and type of food inside the freezer will determine whether it can be saved. A full, freestanding freezer will stay at freezing temperatures about two days; a half-full freezer about one day. How long the food in a freezer will stay frozen also depends upon:

- The kind of food in the freezer. For example, meat and other dense foods will not warm as fast as a freezer full of baked food.
- The temperature of the food. The colder the food, the longer it will stay frozen.
- The freezer. A well-insulated freezer with good gaskets will keep food frozen much longer than one with little insulation or poor gaskets.
- Size of the freezer. The larger the freezer, the longer food will stay frozen.

If the meat has been completely thawed and does not have a questionable odor, it should be used immediately. Meat, poultry and fish should be discarded if there are any signs of spoilage. Thawed foods can be safely refrozen in two situations. First, if it still contains ice crystals. Second, if it has thawed, but is still cold (about 40°F) and has been kept at refrigerator temperature not more than one or two days. Partial thawing and refreezing reduces the quality of foods, especially fruits and vegetables.

Source: NDSU Extension - <http://www.ag.ndsu.edu/disaster/flood/ishome-frozenfoodsafetouse.html>



Basic Emergency Supply Kit

- Water, one gallon of water per person per day for at least three days, for drinking and sanitation
- Food, at least a three-day supply of non-perishable food
- Battery-powered or hand crank radio and a NOAA Weather Radio with tone alert and extra batteries for both
- Flashlight and extra batteries
- First aid kit
- Whistle to signal for help
- Dust mask, to help filter contaminated air and plastic sheeting and duct tape to shelter-in-place
- Moist towelettes, garbage bags and plastic ties for personal sanitation
- Wrench or pliers to turn off utilities
- Can opener for food (if kit contains canned food)
- Local maps

Additional Items to Consider Adding to an Emergency Supply Kit:

- Prescription medications and glasses
- Infant formula and diapers
- Pet food and extra water for your pet
- Important family documents such as copies of insurance policies, identification and bank account records in a waterproof, portable container
- Cash or traveler's checks and change
- Emergency reference material such as a first aid book or information from www.ready.gov

- Sleeping bag or warm blanket for each person. Consider additional bedding if you live in a cold-weather climate.
- Complete change of clothing including a long sleeved shirt, long pants and sturdy shoes. Consider additional clothing if you live in a cold-weather climate.
- Household chlorine bleach and medicine dropper – When diluted nine parts water to one part bleach, bleach can be used as a disinfectant. Or in an emergency, you can use it to treat water by using 16 drops of regular household liquid bleach per gallon of water. Do not use scented, color safe or bleaches with added cleaners.
- Fire Extinguisher
- Matches in a waterproof container
- Feminine supplies and personal hygiene items
- Mess kits, paper cups, plates and plastic utensils, paper towels
- Paper and pencil
- Books, games, puzzles or other activities for children