

Flood Recovery Checklists for Farmsteads

Farm Buildings

- ❑ First, check a building's structural strength. If the building has moved, shifted or twisted, it may not be safe to enter. Check if the roof and walls are straight or bowed. Check the foundation, sill, plate, roof and walls for damage. Look for connections or joints that have separated. If the building has extensive damage, tearing it down and starting with a new building probably will be less expensive than attempting to repair the damaged structure.
- ❑ After the water subsides, clean and dry out the building as much as possible. This can include using a sump pump, mops, brooms and brushes, and fans and/or natural ventilation.
- ❑ Floors probably will be covered with layers of silt and mud. This will need to be removed, and that is easier to do before the mud or silt dries.
- ❑ When the wood is dry, inspect laminated woods, such as plywood, that have been immersed in water to be sure laminations still are bonded together firmly. Check nails to determine whether they are secure.
- ❑ If the building was insulated, the wet insulation must be removed. Floodwaters often will leave absorbent material with a foul odor that is difficult to remove. When checking the insulation, expect it to be wet above the high-water level because of the material's wicking action.
- ❑ If the interior wall sheathing is drywall, it will need to be replaced. Usually the interior sheathing in the out-buildings will be wood, which can be dried. After the sheathing and insulation are removed, inspect the wall studs, sills and plates for structural damage. Damaged components will need to be repaired or replaced.
- ❑ Thoroughly clean milking equipment, grain augers, ventilation fans and other items that were immersed in the floodwaters to remove grit or other contaminants.
- ❑ Clean, dry and lightly oil all metal tools to prevent rusting. Power tools with motors need to be reconditioned by the original manufacturer or its approved representative, or replaced. Floodwaters leave deposits in motors that may cause electrical faults, creating a safety hazard.

Electrical Equipment

- ❑ Animals housed in mechanically ventilated buildings may need to be moved to prevent acute exposure to hazardous gases.
- ❑ Inspect wiring and plumbing for damage. All breaker panel boards, breakers, fuses, disconnect switches, controllers, receptacles, switches, light fixtures and electric heaters that have been submerged generally must be replaced. Check with an electrician.

For more information, see
www.ag.ndsu.edu/flood

- ❑ Do not turn on the power to a flooded structure until it has been inspected and a licensed electrical contractor or electrical inspector has determined it is safe.
- ❑ All electrical equipment, electric motors and other similar equipment such as appliances that have been submerged need to be reconditioned by the original manufacturer or its approved representative, or replaced. Electrical wiring may require replacement, depending on the type of wire or cable and its use. Splices and terminations must be checked to make sure they comply with the National Electrical Code.

Water Systems

- ❑ If you are using a well for your water supply, test the water to determine if it is safe for human or livestock consumption.
- ❑ A well that has been contaminated by floodwaters usually can be cleaned and sanitized. See “Cleaning Flooded Wells” at www.ag.ndsu.edu/flood/home/cleaning-flooded-wells for instructions.
- ❑ If you’re using a rural water system, check for breaks or leaks in the supply and distribution pipes. Flushing all your water lines after the flood also is a good idea.

Flooded or Spilled Pesticides

- ❑ If pesticides are flooded, secure the area or building. Survey the flood damage, wearing the appropriate personal protective equipment.
- ❑ Call the North Dakota Department of Emergency Services’ spill hotline at 800-472-2121 for help if you suspect a major health hazard and/or you believe containment is not possible to prevent further environmental contamination.
- ❑ If you can manage the spill and/or cleanup, you still are obligated to report the spill to the North Dakota Department of Agriculture at 800-242-7535 and North Dakota Department of Health at 800-773-3259.
- ❑ When cleaning, treat all surfaces, equipment, containers, water and sludge as if they are contaminated. Avoid skin, eye and inhalation exposure by wearing the appropriate personal protective equipment.

- ❑ Damaged pesticides can be disposed of free of charge through Project Safe Send, which is held annually in July at 12 to 14 locations across the state. Dates and locations typically are advertised in June. More specific information may be obtained from the North Dakota Department of Agriculture’s Project Safe Send coordinator at 800-242-7535.

Fuel and Oil Spills

- ❑ Report fuel spills to the North Dakota Department of Health and your insurance company.
- ❑ Ventilate to reduce vapors that are combustible and hazardous to your health.
- ❑ Wear rubber gloves, overshoes and a proper respirator because exposure to fuel, oil and chemicals can cause health issues.
- ❑ Use absorbent materials to collect the oil or fuel.
- ❑ Discard porous materials that are impossible to clean.
- ❑ Use products intended for petroleum removal to clean concrete. Structural wood can be cleaned using products specifically designed for petroleum removal, but removing the petroleum product adequately may not be possible if it has soaked into the wood.
- ❑ Remove impacted soil.
- ❑ For cleanup and disposal details, contact the Waste Management Division of the North Dakota Department of Health.

Flooded Grain Bins

- ❑ Grains swell when wet, so bin damage is likely. Bolts can shear or holes elongate. Look for signs such as stretched caulking seals, misaligned doors or similar structural problems.
- ❑ Electric wiring, controls and fans exposed to water need to be evaluated and possibly reconditioned or replaced. Do not energize wet components. Be sure the power is off before touching any electrical components of flooded systems.
- ❑ Salvage wet feed and grain as soon as possible. Both will begin to heat and mold very quickly, leading to spoilage as well as the possibility of spontaneous combustion. Get the wet grain to a dryer quickly if possible. This is the surest way to save wet grain.

Animal Carcasses

- ❑ Carcasses must be disposed of as soon as reasonably possible.
- ❑ Composting carcasses is an effective management tool that kills pathogens, reduces volume and transforms the animal into a soil amendment.
- ❑ Bury a carcass 4 feet above the water table and cover it with 4 feet of fill. Mound the soil to shed water. Avoid sandy or gravelly areas, or areas within 10 feet of bedrock. The site must be a minimum of 200 horizontal feet from surface water.
- ❑ Incinerating a carcass must be done in an approved incinerator.
- ❑ Haul carcasses or animal parts only in vehicles or containers that are leakproof and covered.
- ❑ Learn more with “Animal Carcass Disposal Options” at www.ag.ndsu.edu/pubs/ansci/waste/nm1422.pdf.

Containment Pond Management

- ❑ Monitor containment pond levels and inspect dikes for erosion to prevent a discharge.
- ❑ Apply pond effluent before a discharge occurs. Ideally, apply the effluent on dry soil. However, dry soils sometimes are difficult to find. Apply the effluent away from surface waters on a vegetated area on gentle slopes. Spread it over as many acres as possible. If you have any issues or questions, call the North Dakota Department of Health at 701-328-5225.

Livestock Care After a Flood

- ❑ You may need to move dairy cows to a neighbor’s milking unit, use natural instead of mechanical ventilation and feed by hand if your buildings are not usable.
- ❑ Take special precautions against flood-related accidents or diseases in poultry and livestock. Give animals extra care, particularly if they have been stranded by floodwaters and have been off regular feeding schedules. Watch for signs of flood-related diseases, such as lameness; fever; difficulty breathing; muscle contractions; or swelling of the shoulders, chest, back, neck or throat. Be prepared to contact a veterinarian if you spot trouble.
- ❑ If grazing cattle swallow storm debris such as nails, wire, fence staples or other metal, the animal can die. Putting magnets into cattle’s stomachs is the best way to protect them from “hardware disease.” You can administer stomach magnets with a balling gun, which often is used to administer pills. You can get magnets from your veterinarian or animal health products supplier.
- ❑ If you have a feed mill, grinder-mixer, total mixed ration mixer or forage harvester equipped with a magnet, make sure the magnet is in place and working properly.
- ❑ See more in “Maintaining Livestock Health After a Flood” at www.ag.ndsu.edu/flood/farm-ranch/maintaining-livestock-health-after-a-flood.

Crop Fields

- ❑ Wear appropriate personal protective equipment and clothing while clearing debris from fields.
- ❑ Have soil tested because flooding may have affected soil nutrients.
- ❑ Avoid operations on wet soils and limit load weights to reduce soil compaction.
- ❑ Flooded fields may be slow to dry.

**For more information, see
www.ag.ndsu.edu/flood
or contact:**

Your county Extension office

www.ag.ndsu.edu/extension

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