



UNIVERSITY OF ALASKA
FAIRBANKS

College of Rural Alaska

Cooperative Extension Service

What to Do **AFTER THE FLOOD** Emergency Flood Information

SAL-00005

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WATER

If your area has been flooded, your water supply may be contaminated. To be sure of your drinking water, you should purify it either by boiling or by adding a chemical.

Boiling

Boil the water. Allow it to cool. If the water has a flat taste, pour it back and forth between two containers two or three times to aerate.

Chemical Additives

1. Add one drop of a solution such as Clorox, Purex, White Sail, B.K. Rainbow (containing 3.5% available chlorine) to each quart of water.
2. **Or**, add four drops of Zonite (1% available chlorine) per quart of water. The strength of the solution to be used (percent of available chlorine) will be found on the bottle label.
3. If the water is cloudy, add 3 drops of the 3.5% available chlorine solution to each quart of water, or 10 drops of the 1% available chlorine solution to each quart of water.

4. After adding chlorine solution to the water, mix thoroughly and allow to stand for 20 minutes before drinking.
5. If larger quantities of water need disinfecting with chlorine solution, use the table that follows on page 2 for proper dosages.

Disinfecting Individual Wells

Mix ½ gallon of household bleach (Clorox, Purex, White Magic, Alaska Pride, etc.) into five gallons of water.

Introduce this mixture into the well. Reactivate the pump and progressively turn on each outlet tap until the odor of chlorine is detected. Make certain you have turned on all the water outlets including all tub, shower, faucets and water closets to ensure chlorination of complete distribution system.

When done, allow the water to remain in the well and plumbing overnight if possible, but in any event for at least two hours.

Drain the system of the chlorine mixture by opening all the outlets and allowing the water to run until the odor of chlorine is undetectable.

After the chlorine odor has disappeared, take a water sample according to the instructions provided with a water sample bottle. Have your water tested.

NOTE: Procedure will only be effective on wells that are not permanently contaminated. To be effective, the procedure may have to be repeated.

The use of trade names in this publication does not imply endorsement, nor is criticism implied of similar products that are not mentioned by the Cooperative Extension Service.

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Gallons of Water	3.5% Chlorine Solution		1% Chlorine Solution	
	Clear Water	Cloudy Water	Clear Water	Cloudy Water
5	¼ teaspoon	½ teaspoon	¾ teaspoon	2 teaspoons
10	½ teaspoon	1 teaspoon	1½ teaspoons	4 teaspoons
20	3¾ teaspoons	1½ teaspoons	2¼ teaspoons	5 teaspoons
30	1 teaspoon	2 teaspoons	3 teaspoons	8 teaspoons
40	1¼ teaspoon	2½ teaspoons	3¾ teaspoons	10 teaspoons
50	1½ teaspoons	3 teaspoons	4¼ teaspoons	12 teaspoons

Check and Clean the Pump and Motor

1. Disconnect the electric motor and take it to an electrical repair shop. The shop can check it for any shorts or grounds caused by moisture. If badly saturated with water and mud, thoroughly clean the motor and dry out the windings in a drying oven. Thoroughly oil the bearings before reusing.

Motors on ejector or jet pumps have two types of mountings. One motor type is a separate unit mounted on the pump that can be removed and easily serviced. The other type has a motor that is a part of the pump: the motor shaft may be one piece running into the pump. In this case, remove the pump and motor as a unit and take it to an electrical shop. It is not necessary to remove drop pipes.

2. Electrical controls and pressure switches should be cleaned and dried. Electrical wiring should be checked for shorts.
3. The water pumps should be cleaned and valves checked for mud and dirt. The inspection plant on the side of the pump gearing should be removed and all dirt and water removed from gears and gearbox. Put fresh oil in the gearbox.
4. Your storage tank should be all right unless muddy water was pumped into it before the pump was shut off. If dirty, drain and clean thoroughly.
5. After the system is put back into service, operate it for some time to thoroughly pump out the well and force fresh water through all the pipelines. Check the motor for proper switch operating and overheating, and check the pump gearbox for proper oil circulation.

FOOD

If you have food that has been flooded, you are faced with the question of what you can use and what should be thrown away.

Food items that have been in contact with floodwater and are not in watertight containers, such as fresh fruit and vegetables, cardboard boxes containing cereals or dried fruit, and bags of flour, should be destroyed.

Root vegetables can be used, but wash carefully, peel and cook before eating.

Canned foods that have come in contact with floodwaters should be checked carefully for leaks. Any questionable cans should be discarded.

Containers with tight seals should be washed first and then disinfected by soaking for 15 minutes in chlorine water. This solution can be made by adding one tablespoon of Clorox, Purex, or Hilex, etc. to one gallon of water.

Chlorine and most of the other chemicals used as sterilizing solutions are poisonous. Care should be taken not to breathe in the vapors or swallow any of the chemicals.

Rinse the containers in fresh water. Do not use any jars or cans having an odor or other evidence of spoilage.

How about frozen food? Well, if your home freezer has been covered with floodwaters, chances are that the food inside has been damaged by seepage. This food should be thrown out.

If the electricity has been off, but no floodwater has gotten inside, the amount of food in the freezer box will determine its keeping qualities. A fairly full box will last through a two or three day period without much loss of quality and flavor. Partially thawed meat should be refrozen at once. If the meat has been completely thawed, it should be used at once, or cooked and refrozen.

Meat, poultry and fish should be discarded if there is any sign of spoilage. Boxes of fruits and vegetables that are still firm may be refrozen.

CLOTHING

Dry Cleaning Clothing

Allow garments to dry slowly at room temperature. Do not hang near a warm radiator or stove. Shake and brush well to remove as much dirt as possible before sending to the dry cleaner. Woolen coats, suits, dresses and other garments ordinarily commercially cleaned should be taken to the dry cleaners.

Washable Clothing of Cotton, Rayon, and Linen

First brush off all loose dirt, and then remove mud by rinsing in cool water. Wash as usual. Use enough detergent to keep fine soil from re-depositing on fabrics. If stains cannot be removed by washing, use a bleach.

To remove mildew, wash fresh stains with soap and water: rinse well and dry in the sun. If stains remain, use lemon juice and salt, or a solution of a tablespoon of household bleach to a pint of lukewarm water. Test color garments in a seam before using bleach on them.

Bacteria can remain alive on fabrics for a long period of time. A disinfectant is advisable for destroying disease-producing bacteria. Four types of disinfectants, quaternary, pine oil, phenolic, and chlorine (liquid chlorine bleach) are effective. See section on Sanitizing Clothing for more information.

Washable Woolen Clothing

First, shake and brush washable woolen clothes to remove dirt. Next, rinse in lukewarm water to remove soil lodged in fibers. Then prepare an abundance of lukewarm suds with neutral soap; or use a synthetic detergent recommended for laundering fine fabrics. Using a disinfectant is also recommended. Liquid chlorine disinfectant **should not** be used on wool. Immerse material and work it gently in suds or detergent solution with as little agitation as possible. If necessary, wash

a second time in lukewarm suds. Rinse carefully in several changes of lukewarm water.

Woolens should be dried in a warm place but not near a fire or in direct sunlight. Never allow wool to freeze. Hang knitted underwear from shoulders. Spread sweaters and other knitted garments on a flat surface and shape to desired dimensions.

Press wool garments while still damp with medium-hot iron, or allow to dry and press on the wrong side with a steam iron. If ironing is done on the right side, protect the surface with a pressing cloth. Be sure to leave a little moisture in the wool.

SANITIZING CLOTHING

Clothes can be sanitized if they are boiled or washed for 20 minutes in water at a temperature of 140°F. However, woolens should not be boiled. Home laundering cannot be expected to destroy bacteria because most wash cycles are shorter and the water temperature is lower than those recommended.

You can inexpensively and easily sanitize your clothing while it is being laundered by adding one of the following disinfectants to either the wash or rinse water.

Quaternary Compounds

Safe for all fibers. Will not damage wool and silk, but there may be some color change. Little or no odor.

Trade names: Roccal, Zephtrin

When to add: At beginning of rinse cycle.

Water temperature: Cool for wool and silk.

Amount to use:

Top loading machine: 4 Tbs. Roccal, 2 Tbs. Zephtrin

Front-loading machine: 2 Tbs. Roccal, 1 Tbs. Zephtrin

Available in drug stores.

Liquid Chlorine Bleaches

Do not use on wool, silk, or resin finished cottons.

Safe for other fibers.

Trade names: Clorox, Purex

When to add: Before putting clothes into machine.

Otherwise, dilute in one-quarter water before adding it to the washer.

Do not use bleach in the rinse water.

Amount to use:

Top-loading machine: 1 cup

Front-loading machine: ½ cup

Available in grocery stores.

Pine Oil Disinfectants

Safe for washable clothing. Do not use on wool or silk because odor lingers. Label should state product contains at least 80% pine oil.

Trade names: Pine-O-Pine, King Pine, Fyne Pyne

When to add: At beginning of wash cycle, preferably before placing clothes in the machine. Otherwise, dilute in one-quart water before adding to the washer.

Amount to use:

Top-loading machine: $\frac{3}{4}$ cup

Front-loading machine: $\frac{1}{2}$ cup

Available in grocery and drug stores.

Phenolic Disinfectants

Safe for washables. Avoid using on wool and silk because odor will remain.

Trade names: Pine-Sol, Al Pine

When to add: Either wash or rinse with water.

Amount to use:

Top-loading machine: 1 cup

Front-loading machine: $\frac{1}{2}$ cup plus 2 tablespoons

Available in grocery stores.

Always

1. Read the label.
2. Follow all directions and heed all precautions.
3. Measure disinfectant carefully.
4. Add disinfectant to the recommended wash or rinse cycle.

BEDDING AND HOUSEHOLD

LINENS

Mattresses and Pillows

Mattresses soaked with floodwater should be discarded because reconditioning is too difficult to be done at home. **If you must use temporarily**, scrape off surface dirt and expose to sunlight so it will dry as much as possible. Cover with rubber sheeting before using. A good innerspring mattress may be sent to a commercial renovating company. Compare the cost for renovating against costs for replacing.

Feather and foam rubber pillows may be washed in automatic washers, but not pillows stuffed with kapok or cotton. If ticking is in good condition, feathers and ticking may be washed together. Open a few inches of the seam in opposite corners of the pillow. Sew loosely by hand or fasten with strong safety pins. If ticking is in bad condition, transfer feathers to a muslin bag

larger than the ticking. Sew up end and wash feathers in this bag. When using an automatic washer, do not overload the machine. Usually, two pillows is a full load. Use the complete washing cycle, stopping at midway to turn the pillows over by hand. If no automatic washer is available, wash in lukewarm water for 4 to 6 minutes. Repeat if necessary and rinse in lukewarm water.

Feather pillows can be dried in an automatic dryer, but **foam rubber pillows must never be dried in an automatic dryer; air-dry them**. If you line-dry the pillows, change the position frequently and shake vigorously to distribute the feathers evenly. It may not be possible to remove all objectionable odors from pillows. They may have to be replaced.

Blankets, Quilts, and Comforters

Remove surface dirt by shaking and brushing. Rinse in lukewarm water to remove soil lodged in fibers. Prepare lukewarm suds using a mild detergent. Immerse blanket and work in the suds gently with as little agitation as possible. If necessary, wash a second time in suds. Rinse in several changes of lukewarm water. Hang blankets over two lines or dry in an automatic dryer with several clean bath towels, which are dry and have been preheated. While still damp, brush blankets on both sides to lift nap. Electric blankets should always be **line-dried** and gently stretched into their original shape.

Wash lightweight quilts the same way you wash wool blankets. Dry outdoors in the sun, if possible, to remove unpleasant odors. Thick comforters may need to be taken apart and the cover and filling each washed separately.

Sheets, Towels and Table Linens

First brush off all loose dirt. Then, rinse mud-stained fabrics in **cold water** to take out particles of soil lodged in the fibers. Wash items in **warm** sudsy water, several times if necessary. Hot suds will set stains caused by red and yellow clay. In extreme cases, try bleaching white cottons and linens using chlorine or perborate type bleach in further washings. Do not over-bleach flood stained fabrics. Sun drying may aid in bleaching. Bleaches may be used on colored fabrics, but follow the directions on the package carefully.

BOOKS, FAMILY PAPERS AND LEATHER GOODS

Books and Family Papers

Place books on end to dry with the leaves separated. After a time they should be piled and pressed to keep the leaves from crinkling. To prevent mildew, this alternate drying and pressing should be continued until the materials are thoroughly dry.

If books and papers are very damp, sprinkle cornstarch or talcum between the leaves to take up the moisture; leave for several hours and then brush off. To prevent musty odors, a little heat and separating the pages are desirable toward the end of the process.

Leather

Remove surface dirt from leather by rinsing with cold water. Then, wipe with a dry cloth. Stuff purses and shoes with crushed paper to retain their shape. Leave suitcases open. Air-dry leather away from heat and sun.

When dry, rub with saddle soap. Neatsfoot oil may be used on shoes that have become stiff, however, it causes leather to darken.

Paste type, neutral floor wax may be used on leathers as a final polish if they are not to be refinished by a commercial cleaner. Use steel wool or a suede brush on suede.

Rinse leather and suede jackets in cold water. Dry away from heat. You may want to have leather garments checked over by a professional cleaner.

CARS AND TRACTORS

Engines and equipment that have been flooded need special care when cleaning and reconditioning. Dirt and sand in the bearings and precision parts will be damaged if the motors are operated before being cleaned. Delay in cleaning may cause parts to rust and corrode.

Do not move cars, cats or tractors or turn the engine over; dirt will damage the bearings and precision parts if started before cleaning.

If you have urgent need for the piece of equipment or don't feel it is worth the cost of having it reconditioned by a mechanic, you can use the following procedure. However, this service may not be thorough enough to prevent eventual damage and the need for engine overhaul.

1. Remove spark plugs, air cleaner, intake manifold and carburetor. Clean and wash these parts thoroughly in kerosene or cleaning solvent.
2. Drain the oil in crankcase and disconnect fuel lines.
3. Crank the engine slowly with the spark plugs removed to force the water out of the cylinders.
4. Squirt light lubricating oil in each cylinder and let stand for about five minutes. Then crank the engine slowly to permit oil to lubricate cylinder walls and rings.
5. Completely flush the fuel system (tank, pump, lines, etc.)
6. Replace magneto, starter and generator, or if time permits, clean and dry them as indicated in the section on electrical equipment. A specialist should service this equipment.
7. Drain and flush the transmission and final drive with kerosene. Refill them with new, clean oil.
8. Remove all wheel and track bearings that do not have positive seals and clean them with kerosene or solvent. Replace them and lubricate with new clean lubricant. Factory-sealed bearings should not require cleaning if the seal isn't broken.
9. If there was a substantial amount of dirt in the crankcase, transmission, or gear train, the oil should be changed again after a few hours of operation.

Before trying to operate any machine, inspect it carefully and remove all dirt and debris.

Carefully clean all exposed gears and sprockets with kerosene or solvent. Then coat with light oil. Clean all chains by soaking and dipping them repeatedly in a bath of kerosene or solvent. Then, soak for several hours in a bath of light oil and drain off the excess oil.

Inspect enclosed gear cases for presence of water or grit. If present, or if in doubt, drain case, flush with kerosene and refill. Clean and oil or grease all bearings that do not have protective seals. Non-sealed bearings with pressure grease fittings can sometimes be cleaned by merely forcing grease into them until a

considerable amount has oozed out from the side of the bearings. Caution: Some sealed, factory-lubricated bearings are equipped with grease fittings. The seals of these bearings may be damaged if grease is forced out through them to any great extent.

Examine all belts and repair or replace them if necessary.

After cleaning all moving parts of a machine and replacing any parts that have been removed for cleaning, carefully rotate the moving parts by hand to be sure they operate freely. Then slowly engage the clutch of the power source and operate at reduced speed until you are certain everything is in order.

ELECTRICAL MOTORS AND GENERATORS

When generators and motors have gone through a flood, it is usually advisable to have them inspected and reconditioned by an experienced electrician. If such service is not available, a careful owner may obtain satisfactory results.

Remove and thoroughly wash all bearings that are not sealed. Replace them after oiling or greasing. Clean the oil wells supplying the bearings and fill them with fresh motor oil.

Clean centrifugal switches, slip rings, and commutators of grit and dirt particles and examine brushes to see whether they move freely in their holders.

Take out the armature, or rotating member, and clean it well with water from a hose under low pressure or with pails of water. High-pressure water or air may cause even fine grit to damage surfaces or insulation. Treat the stationary coils the same way. After washing with water, wash with kerosene—not gasoline. **Remember, there should be no smoking and no exposed flame near kerosene.**

The motor coils, either rotor or stator, should be dried by heating to a temperature of about 150°F for 10 to 15 hours. The windings should then be painted with a light insulating varnish. One coat should be applied and then baked for a period of 4 or 5 hours at a temperature of 200°F to 250°F. A second coating of the same material should then be applied and baked for 3 to 4 hours at the same temperature as the first coat to ensure a good job.

Before assembling the motor or generator, check starting contacts for corrosion and lubricate all moving parts lightly. Replace oil wicks and renew oil in

reservoirs. The bearings should be thoroughly reconditioned. If sealed-type ball bearings have leaked—allowing grit to enter—the bearings should be soaked in gasoline or oil and any loose grit blown out by compressed air. With sleeve-type bearings, the dirt should be removed with kerosene and the old wicks replaced with new material. If the capacitor overheats, remove it and bake it in mild heat for several hours. If it continues to overheat, replace it.

Electrically driven machinery calls for a combination of reconditioning plus the special attention needed for their motors.

HOME ELECTRICAL EQUIPMENT

Large Equipment

Do not try to operate washers, refrigerators or other large equipment until they are checked by a competent service person, even if electrical power is available. Running equipment before it is properly cleaned may cause more damage than the floodwaters.

Have all large equipment examined by the manufacturer's authorized dealer. The dealer has the detailed information on inspecting and re-operating the particular equipment.

Small Electrical Appliances

Take small appliances such as toasters and mixers to dealers who handle that brand of appliances. Have them checked before they are used.

Freezer and Refrigerator Odor

1. First wash the inside with plenty of soap and water. Then go over the surface with a cloth wrung from clear water. Wipe dry.
2. If soap and water do not get rid of the odor, try washing the freezer with solution of 1 teaspoon baking soda of each quart of warm water.
3. If odor still exists, purchase activated charcoal (a fine powder) at the drug store—about 3 ounces is plenty. Spread the charcoal in a thin layer on a sheet of aluminum foil or a shallow pan on the refrigerator shelf or in the freezer. The charcoal will soak up the odor. Foods can remain in the refrigerator with the charcoal.

After six or eight hours, put the pan of charcoal in a moderate oven to drive off the odor and reactivate it. Odor will disappear. Put charcoal back in the refrigerator or

freezer again until all odor has disappeared. Save the charcoal—you can use it over and over again.

If only traces of the smell remain, it is not likely to affect food frozen and stored in the freezer if you wrap the food securely. When a package is taken out, remove the wrappings and dispose of them as soon as possible.

Sewing Machines

Important: As soon as possible, take the sewing machine head to the local sewing machine agency to have it properly treated.

Rust, more than anything else, causes the greatest damage after a flood. Machined, highly polished, and even some plated surfaces are the first to show signs of rust. Rust discolorations and corrosion deepen each day and unless the rust is removed, a sewing machine can become worthless within ten days.

Thread handling and other functional parts are the most expensive to manufacture and the most highly polished. They are the first to rust unless protective action is taken immediately.

To keep damage to a minimum, the following procedure is recommended:

Sewing Machine Heads and Motors

1. Remove to a dry place as quickly as possible.
2. Wipe all visible water off machine.

Parts and Attachments

1. Parts and sewing machine attachments affected by water should be soaked in kerosene or other suitable cleaner, then drained and soaked in oil. The parts and attachments should be wiped clean of all blemishes, tested and carefully examined. If the stains are not removed, use a cloth dampened with enamel-thinner.
2. Any parts or attachments affected by rust should be taken to the local sewing machine agency.

Cabinets

Salvaging a flood-damaged cabinet depends, to a great extent, on how much was under water and for how long. Usually, it isn't possible to make a definite decision on whether or not the cabinet is salvageable until it has been allowed to dry for a month or two. By that time, any veneer weakness or core damage will show up as warping, splitting, or veneer lifting.

SALVAGING FURNITURE

Take all wooden furniture outdoors and remove as many of the drawers, slides, or other working parts as possible. Drawers may be stuck tight. Do not force the drawers from the front. Remove the back of the piece of furniture by cutting it out if necessary, and push out the drawers from the back.

After the various moving parts of the furniture have been removed, clean off all mud and dirt, using a hose if necessary. Wipe dry. Then take everything indoors again and store them where they will dry slowly. Do not leave them out in the sun; the heat will cause them to warp and twist out of shape.

Some furniture, especially if it is made of solid wood, may be salvaged by re-gluing. Gluing, however, is fairly difficult to do at home because it is necessary to use clamps on many pieces. Before starting this task, decide whether it is worthwhile investing in this equipment and whether you have the time and ability to do the work. If you find the work too difficult or costly to attempt, consult a cabinetmaker.

Repairing veneered furniture is difficult and requires so many different types of tools that it is not practical to attempt at home. Get a cabinetmaker to do the job or have the store from which you bought the furniture send it back to the factory to be repaired. If insurance allows part value on flood-damaged furniture, it may be worthwhile financially to apply the allowance on new furniture rather than to pay for repair on damaged items.

Removing White Spots

Furniture that has not been submerged may have developed white spots or a whitish film or cloudiness from dampness. If the whole surface is affected, try rubbing with a cloth wrung out of a mixture of ½ cup of household ammonia and ½ cup water; wipe dry at once and polish with wax or furniture polish. For smaller areas or spots on varnished surfaces, rub with a cloth moistened with camphorated oil or oil of peppermint. A drop or two of ammonia on a damp cloth and then polish. Cigarette ashes rubbed in with the fingertips can often be effective in removing white spots. If all efforts to remove white blemishes are ineffective, it may be necessary to refinish the furniture.

Mildew

Brush any loose dirt from upholstered furniture and shampoo the fabric. Follow directions given for carpets and rugs. Work quickly. If there is mildew on the

fabric, wipe it with a cloth wrung out of diluted alcohol (1 cup denatured alcohol or rubbing alcohol to 1 cup water). Dry the furniture thoroughly. Or sponge lightly with thick suds of soap or detergent.

If furniture has been wet for a long time, the stuffing may have become mildewed or may even have started to decay. It may be necessary to send the furniture to a reliable dry cleaning or storage company for fumigating.

Stuffing in upholstered furniture that has been submerged may be so deteriorated that it needs to be replaced. Springs may need to be cleaned and oiled and the frame cleaned. If much work is needed, send it to an experienced cabinetmaker or upholsterer unless you are confident of your own ability to do such work.

Rugs

If rugs were damaged by floodwater, let them dry out thoroughly. Then clean by beating or sweeping or by using a vacuum cleaner. If necessary, shampoo with a commercial rug shampoo available at drug and department stores or with a homemade solution of synthetic detergent (syndet).

Leave large rugs on the floor or spread them out on a porch. For convenience, work with small rugs on a table near the sink or laundry tubs.

Washing Procedures:

1. Make a shampoo solution by dissolving 1 part of syndet to 8 parts warm water, or use a soapless shampoo. (Use a mild synthetic detergent, such as you would use for dishes or for fine fabrics.) Beat with an eggbeater until very stiff. Once cup water and 2 tablespoons detergent will probably be enough to clean a small rug.

CAUTION: Do not beat up any more than $\frac{1}{4}$ cup of the solution at a time.

2. Apply the foam with a soft brush to a small area of the rug, using a light circular motion. Use only the foam.
3. Wipe the area two or three times with an absorbent cloth wrung out of lukewarm water. Change the rinse water from time to time as it becomes dirty. Since moisture weakens the fabric in the back of the rug, use as little water as possible.
4. Use Turkish towels or any other soft absorbent materials to absorb the moisture.

5. Apply lather to another small area, overlapping the first. This over-lapping ensures that the whole surface will be well cleaned. Continue shampooing a small area at a time until the entire rug has been cleaned.
6. Use a cloth or dry brush to smooth the nap in one direction.

After shampooing, dry the rugs or carpets as quickly as possible by laying them flat and exposing them to circulating warm, dry air. A fan directed at the rugs will help speed drying.

Make sure rugs thoroughly dry. The surface may seem dry, but any moisture remaining at the base of the tufts will quickly rot the rug causing it to fall apart.

Under ordinary circumstances, colors can run and rugs can shrink when shampooed by home methods. With articles badly damaged by floods, you are usually trying to salvage them for any possible use.

After washing, some types of machine-made pile rugs may need resizing to make them lie flat on the floor. Dissolve one-half pound of granulated glue in one gallon of boiling water. Lay the cleaned rug face down on papers someplace in the house where it can remain undisturbed. Tack it down at intervals and be careful to align it straight and true. Then, with a whitewash brush or a whiskbroom, brush the hot glue over the back of the rug, and let it dry thoroughly.

CAUTION: Do not use so much glue that it will soak through to the right side of the rug.

HOUSEHOLD METALS

Clean metal as soon as possible, especially iron. To remove rust, wash with soap and water, using a stiff brush, scouring powder and fine steel wool. Rinse and wipe dry immediately or heat dry. To re-season cooking utensils, rub with unsalted cooking fat and heat in a low oven slowly to permit the fat to soak into the pores of the metal.

Stainless steel, nickel-copper alloy, or metals plated with nickel or chromium need only thorough washing and perhaps polishing with a very fine powdered cleaner.

If metal plating on furniture or hardware is broken so that the base metal is exposed and rusted, wipe with denatured alcohol, wash and dry the surface, and then wax to prevent further rusting.

Cooking Utensils

Wash aluminum thoroughly and scour any unpolished surfaces, such as the insides of utensils with fine steel wool. Polished or plated surfaces of aluminum should not be scoured but should be polished with metal polish or fine cleaning powder. To brighten the darkened insides of an aluminum pan, fill it with water, add 1 tablespoon vinegar 2 tablespoons of cream of tartar for each quart of water and boil. If the utensils have been submerged and are darkened both inside and out, prepare one of these acid solutions in a tub or wash boiler and immerse the utensils in it.

Copper and brass can be polished with a special polish or with salt sprinkled on a piece of lemon or a cloth saturated with vinegar.

Locks and Hinges

Locks, especially those of iron, should be taken apart, wiped with kerosene, and oiled. If it is not feasible to remove the, squirt in a little machine oil through the bolt opening of the keyhole and work the knobs so as to distribute the oil. Otherwise the springs and metal casing will soon rust and need replacing. Do not use too much oil or it will drop into the woodwork and make later painting difficult. Cleaning and oiling usually will put hinges in order.

BUILDINGS

Make Repairs as Soon as Possible

In spite of damage to buildings caused by high water, much can be done to recover their usefulness. To make the best of it, repair structures as soon as possible.

Key Points

1. Wash out the mud, dirt, and debris as soon as you can. Clean your walls and floors before they dry out. Use a hose and mop or wash rags. Start from the top or upper limit of the flooding and work downward to the floor or basement.
2. Dry out the building. Open doors and windows for good ventilation. If you can, use electric fans to increase circulation. Drying may take considerable time—several days or even weeks—if the weather is damp. Wet wood will decay; dry as soon as possible to reduce decay and mold.
3. Insulated frame walls may require special drying. Strips of siding or plaster can be removed from upper and lower portions of the walls to speed up drying studs and insulation.

4. Check foundations and footings. Start from the bottom when investigating structural features. See that underlying material is not washed out. Replace with gravel or crushed rock. Add concrete where necessary. Raise or brace up in position to make floors level.
5. See that walls are plumb. Check with a level or plumb-bob. Correct and brace walls to keep them vertical.
6. Repair and patch where necessary. You can do this on a temporary basis for now. Final repairs can be done later in dry weather when more time is available.
 - a. Concrete floors are easily patched, using a rich mix of mortar having no coarse aggregate. Use a one-to-four mix.
 - b. Wooden floors will dry out slowly. Don't build hot fires to rush drying. Try to prevent buckling and warping by driving more nails wherever flooring tends to lift or bulge. After it has dried completely, the surface can be planed level or sanded smooth. Shellac, lacquer, or varnish can be applied for the finish.

BASEMENTS

Pump your Basement Out Slowly

If your basement was flooded, it may suffer little or no structural damage from the inflowing water. However, structural damage to walls and floors can result from pumping the water out of the basement too soon or too fast.

Don't start pumping until the surrounding floodwaters are below the basement floor level. Water inside the basement gives an outward force, bracing the walls against the pressure of water and waterlogged soil on the outside. If you remove the water from the basement too soon or too quickly, the walls may be pushed in.

For best results, water should be pumped from the basement in stages. If the water is removed from the basement slowly, seepage through the walls may help relieve the pressure on the outside of the wall.

Be careful with electricity. Before entering the basement, be sure all electrical outlets are disconnected. Also, check around the building for possible evidence of cave-ins.

In general, damage will consist of buckled walls, settled walls, or heaved floors. Repair measures will vary with the cause of the damage.

Where buckling has caused serious weakening of a wall, the best procedure is to rebuild all damaged parts. In less severe cases, immediate repairs may not be necessary.

In any wall where noticeable buckling has occurred, however, normal ground pressures coupled with freezing and thawing may cause the wall to eventually fail. It's advisable to rebuild damaged parts of the wall.

If pilaster were not built in the original wall, they should be added when the walls are rebuilt. Pilasters will increase the strength of the wall and should be used where wall lengths exceed 15 feet.

If the floor heaves and does not return to its original level, it may be necessary to remove the floor and replace it. The following steps are suggested for basement floor construction. Place six inches of gravel fill on the basement floor surface. Cover this with a vapor barrier. Then, place a 4-inch concrete floor with mastic joints between the floor and walls.

In cases where the floor returns to its original level, but objectionable cracks or a bad surface remains there is sufficient headroom, a new floor may be placed over the old one. A vapor barrier should be placed between the floors, and the new floor should be at least two inches thick.

FLOORS AND WALLS

Water coming into the house through the doors and windows may cause less damage to the floors than water coming up from below. The floor covering will protect the floor to some extent if the water does not remain on it for too many days.

Long submersion, on the other hand, will loosen adhesives and cause wooden floors to warp. This will result in loosened tiles and bulging sheet linoleum.

Rubber and asphalt tiles and inlaid linoleums that are glued to the floor may buckle. If water remains between the floor and the floor covering, you may have to slash the linoleum in the places where it has buckled or remove the loose pieces of tile until the water has evaporated. Then the covering may be re-glued.

Sheet linoleum presents the biggest problem because the water may seep under the large area. It may be necessary to remove the entire sheet. The sheet may

often be re-cemented after the floor has thoroughly dried if carefully removed. It may take as much as six weeks. An entire new sheet of lining felt will probably be needed.

If linoleum is broken, brittle, and cannot be salvaged, remove the linoleum with a chisel or hoe. Be sure to let the floor dry thoroughly before laying any new type of floor covering.

Silica gels, obtainable from the stores that handle supplies from chemical companies, are excellent materials for absorbing excess moisture from rooms, storage closets, chests, drawers, and trunks. Ventilation and heat will help too.

Walls that have been flooded are a different kind of problem. Do not attempt to wash damp plaster. It should not be rubbed or cleaned until it is bone dry. Then it may be rubbed uniformly and lightly with sponge rubber or a good wallpaper cleaner.

With care, plaster may be wiped with a slightly damp cloth and dried immediately. Leave badly stained walls for treatment when final redecoration is done. Clean washable wallpaper the same as a painted wall. Work quickly so paper does not become soaked.

Wallpaper hanging from walls and ceiling is difficult to replace because it is brittle and is likely to be badly stained. Tear it off and redecorate when convenient. Small sections of wallpaper may be re-pasted in place.

Re-paste edges or sections loosened. Use a commercially prepared paste or make your own. Mix 2 pound of wheat flour and 1 quart cold water to a smooth paste; stir in 2 quarts of boiling water and continue boiling until paste is semitransparent; add 1 ounce of alum that has been dissolved in ½ cup of hot water.

For painted walls, use water with mild soap or a commercial cleaner. Wash a small area at a time, working from the floor up. Rinse with clean water immediately. Wash the next part, overlapping the first part until the wall is finished. Ceilings should be done last. Badly stained walls will need redecorating.

INCOME TAX DEDUCTIONS

Personal Property

Individual taxpayers who itemize their deductions may be entitled to an income tax deduction. The deductible loss may be determined by the amount spent to remove mud and debris or to repair and restore the house, fence, garage or other residential buildings. The decrease in fair market value, which also may be used as a basis for the loss, must be determined by a qualified appraiser. A qualified appraiser is a member of the American Institute of Real Estate Appraisers, a person who is approved to make appraisals for the Veterans Administration, Federal Housing Administration, or someone who would be recognized as an expert witness in a court of law.

The first \$100 of casualty loss, on personal property only, is not recognized by the Internal Revenue Service. Therefore, the total deductible amount must be reduced by \$100.

For example, a person computing the casualty loss on personal property and using repair cost as a basis might have the following deduction:

Amount spent cleaning house & furniture	\$650
Amount spent repairing appliances	100
Cost of replacing windows	60
Amount spent replacing shrubs	<u>110</u>
Total cost of restoration	\$920
Amount paid by insurance	60
Casualty loss	860
IRS limitation	<u>100</u>
Amount deductible	\$760

Another person using the decrease in fair market value method as determined by a qualified appraiser would have the following deduction:

Fair market value before flood	\$18,000
Fair market value after flood	<u>6,000</u>
Amount of casualty loss	\$12,000
Cost of property	10,000
IRS limitation	<u>100</u>
Amount deductible	\$9,900

Business Property

Casualty losses from business property flooding are deductible losses. First consideration should be given to establishing the extent of the deductible loss and preparing evidence to support the deduction. Such things as before and after photographs, receipts for

repair and restoration expenses and appraisals by qualified appraisers (one whose judgment will hold up in a court of law) are good evidence.

Completely destroyed business property qualified as a deductible tax loss by the amount of the adjusted basis of the property minus any salvage, insurance proceeds or other recovery. Partially destroyed business property qualifies as a deductible tax loss by the amount of adjusted basis or the decrease in fair market value, whichever is lesser. This loss must also be reduced by the salvage, insurance proceeds or other recovery.

The adjusted basis of partially destroyed property must be decreased by the amount of casualty loss (including salvage, insurance or other recovery) and then increased by the expenditure for repair or restoration.

Casualty Losses Of Buildings And Equipment

The adjusted basis of building and equipment may be taken from the depreciation schedule for last year's tax return. The decrease in fair market value is determined by the expenditure necessary to restore the buildings or equipment at or near their adjusted base value. The loss, as determined by this method, is also limited to the adjusted basis reduced by insurance or other recovery.

Casualty Losses To Land

Deductible losses due to land erosion or deposits are limited to the decrease in the fair market value of the property. This decrease is determined either by a qualified appraiser or by the expenditure necessary to restore the land at or near its pre-casualty adjusted basis. The adjusted basis must be lowered in accordance with the loss and increased in accordance with the restoration expenditures.

The casualty loss claim should be attached to the income tax return and entered as part of the itemized deductions. Be sure you show proof of your losses when claiming a casualty loss. Photographs, before loss, after loss, and after the property has been repaired, restored or replaced are very helpful.

Please check current Internal Revenue Service rulings. If you are uncertain about preparing your tax forms yourself, consult or use a professional tax preparer.

