# Facts about Plumbing


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**The Plumbing Code**

The Code outlines the best and most modern methods to be used in plumbing installations. Since the plumbing in any private or public building is a part of the community water and sewage disposal system, it is vital that such installations be left to the licensed professionals. The protection of the public health and safety must be maintained by the establishment of sound code provisions. A plumbing or sanitation code is not a plumber's code. It is rather a set of rules and regulations imposed by cities, counties and states on anyone who undertakes any work involving the installation of drinking water, sewer or toilet facilities in homes, offices, factories, schools and hospitals. Regardless of who might do the work, plumbing and sanitation codes require that it be done in a specific, safe manner because it was found that failure to do so caused widespread disease, which can be crippling and deadly-to the community. Plumbers must demonstrate their competence as installers of plumbing systems to an official executing board prior to being issued a license.

**Inspection and Permits**

Through the issuance of permits and the requirements of public inspections, a community can assure itself of proper plumbing code enforcement. The permit allows the plumbing inspector to protect the consumer by assuring plumbing installations are done properly. The inspection of such plumbing work insures that the installation is being completed in accordance with code provisions.

**Take Care of Our Plumbing**

The average household plumbing system represents an investment of about fifteen percent of the value of the house and is the most frequently used of all the housing systems. A smoothly functioning plumbing system is a pin to health and adds to the convenience of modern living.

There are many things that a homeowner can do to help maintain their plumbing system and there are many things that should be left to an expert, the plumbing contractor. Minor repairs to your plumbing system should be made promptly. Such annoyances such as a clogged drain, dripping faucet or a leaking flush valve in the toilet, are more than a mere bother - they usually waste money and could potentially lead to costly repairs if left alone. Major repairs, replacements, and new plumbing installations should be left to the licensed plumbing contractor. His working methods are based on years of experience - and his guarantee is assurance that all materials and methods are of the highest quality.

**Drains**
Plumbers get more calls to open clogged drains than for any other service. Many such calls could be prevented by greater care in the use of drains. The most-used drain is the one in the kitchen sink and that is the drain most often clogged. Preventing this situation can be done by carefully watching what is emptied into the sink drain and by the regular use of a safe biodegradable waste digester. Your plumber can give you more information on these products. Sink stoppages are usually caused by liquid fats, emulsified by warm dishwater and carried through the pipes. The water cools as it proceeds to the main sewer and leaves the fatty deposits along the way. A film of grease forms on the pipe wall, then another and another. Coffee grounds and bits of food add to this accumulation layer until the pipe becomes impassible.
It is a good idea to pour excess grease into a tin can and throw it out with the garbage, not down the sink drain. When using a food disposer, always let sufficient cold water run to carry the particles down and into the main line to prevent buildup in the smaller waste lines.

In the event of a stoppage, you should have a plunger. Cup it tightly over the drain and plunge it vigorously several times. If it is a double drain sink, make sure you seal the other drain, so water will not splash out into the other bowl or on you. Drain piping can also be cleaned by removing the J-bend on the trap below the fixture. First place adhesive tape around the packing nut or wrap the wrench jaws with cloth to prevent scratching the metal surface. If plastic piping is in place, do not grip the nuts too tightly with the wrench, as they can crack easily. Place a bucket directly under the pipe to catch any dripping from the open pipe. Pull out the clogging material with a piece of wire or small hand-turned cable. If you take the trap off, have some new gaskets ready to slip into the joints.

**Toilet Drains**
A clogged trap way in a toilet is a ticklish problem, so be careful with whatever method you use for cleaning the drain. Most toilets are made of vitreous china which might crack if exposed to extremely hot water. A plunger will normally handle simple toilet clogs. Another method of cleaning a water closet trap or toilet is the use of an auger with an adjustable, crank-type handle. Known to plumbers as a "snake," the spring-steel coil is easily worked past the trap and down the pipe. A three foot auger is inexpensive and will quickly drill through most clogs. Use the auger carefully. Careless handling may crack the toilet. If the rubber-cupped plunger or the auger does not clear the toilet, call your plumber.

**Tubs Drains**
When trying to clear a plugged bathtub drain, place a heavy cloth in the bottom of the bathtub so your shoe soles won't scratch the baths enameled surface. Hold your hand or rag over the overflow plate, cup the plunger over the drain and plunge it vigorously several times. If it doesn't open easily, the drain may require cabling to open it. Heavy steel spring coils should not be used to clean traps under lavatories, sinks, or bathtubs. A more flexible type of wire or spring should be used -- one which is easy to work through

the bend of the trap. Again, if the rubber-cupped plunger or the auger does not clear the toilet, call your plumber.

**Floor Drains**
To clean out a floor drain, remove the strainer or grating which covers the drain box. The dirt and grease can then be dug out with a spoon or a stick. After a hooked wire or coil spring-steel auger will clean out the bend or trap. Check to find out whether a removable clean-out plug has been provided to make this job easier. When the clogging material has been removed from the trap, pour a pail or two of hot water into the drain to wash out any loose material. Check the strainer itself and clean it in hot water and soap in order to open all holes. The floor drain should be checked regularly, especially one that is not often used, since water in the trap may evaporate. This would allow sewer gases to enter the room. Pour a pail of water into the drain periodically in order to make certain of a proper water seal.

**Fittings**
Fittings (faucets and valves) are used more often than any other part of the plumbing system. They get plenty of use but are built to take it, under normal conditions. The best modern fittings are all chrome plated brass and will last a lifetime under everyday use. They clean easily with soap and warm water.
Gaining in popularity are polished brass fittings and trim. These will hold up well, as long as certain precautions are observed. NEVER use any abrasive cleaner on polished brass. This can scratch the protective coating on the brass finish resulting in deterioration or pitting of the brass plating. Also avoid use of solvent based cleaners because they can be deleterious to the polished brass finish. New technologies have brought about the development of improved finishes that can withstand more wear, but check the manufacturer's warranty regarding it to determine whether or not you have the "new and improved" lifetime warranty finish.

*Caution: The metal chromium is easily dissolved in hydrochloric acid and sulfuric acid. Muriatic acid has for years been considered a good tile cleaner, but only where there are nickel plated plumbing fittings. Where chrome plating is present, clean bathroom tile with warm oxalic acid never with muriatic or sulfuric acids. Even covering the chromium surfaces with cloths will not prevent the acid fumes from inflicting permanent damage.*

**Washerless Faucets**
Washerless faucets can be either single handle or the two handle type. In washerless faucets, the control of the water flow is done by a replaceable cartridge or arrangement of seals that allow water flow when the holes or ports are lined up in the proper configuration. Giving the handle an extra hard twist to stop water flow will be ineffective. This type of faucet does not use compression strength to stop water flow. A washerless faucet does not mean it will never leak, but rather because of the way it is designed, the parts will last much longer, as their design minimizes friction and wear. When repairing this type of faucet or requesting service on one, it is vital that you know the brand name, or have a sample of the part you require, as there are hundreds of faucet cartridges and parts kits on the market today. Your licensed plumber will carry an extensive assortment

of faucet parts in his service truck, but it is impossible to carry absolutely every part. So it can be very helpful if he knows in advance, the brand of faucet.

**Compression Faucets**

In a compression type faucet, you will find the conventional setup - a faucet washer on the end of the stern. Replacing the washer usually will correct a dripping faucet. However, when removing the stem, always check the seat inside the faucet body - the brass ring that the washer grinds against. The faucet seat can be worn or grooved, making the washer replacement ineffective within days. The washer and seat are the two parts of a compression type faucet that receives the greatest amount of wear. It is not difficult to replace a washer. First, shut off the water supply. Usually, the shut-off valve is under the sink in the kitchen, or in the bathroom, under the lavatory basin. If there is none, shut off the branch-line valve in the basement or the main valve where the water supply enters the house. Pad a smooth jawed wrench with a cloth, then, using the padded wrench, unscrew the large packing nut and turn out the faucet stem. Then, with a screw driver that fits the screw slot closely, remove the screw from the bottom of the stem and pry out the worn washer. If the screw is tight or stubborn, tap its head lightly or apply penetrating oil (WD-40). Next, clean out the washer seat or compartment. When this is done, insert the new washer of the correct size and composition for hot or cold water. Some of the newer, soft neoprene washers are for both hot and cold water and have a long life. The washer should fit snugly without having to be forced into position. After inserting, replace the screw and tighten. With cloth over finger, clean the valve seat inside the faucet. The edge should be smooth and free from deep nicks. If you find it badly worn, you will probably need to replace the seat or have the entire faucet replaced by the plumber. Otherwise, it will leak again. Next, replace the faucet stem and turn it in. Tighten the packing nut. Be careful not to tighten the nut more than necessary to stop seepage around the faucet stem. Remembering that a faucet leaking 60 drops a minute (not unusual) will waste 2,299 gallons of water every year. Homeowners should repair leaky faucet at once. You pay twice - once for the water going through the meter, and then again on your sewer bill, which is based on water usage.

**General Care of Kitchen Sinks**

Today, kitchen sink bowls come in many different materials. Although enameled cast iron remains an attractive and durable product, many people today are choosing bowls made of stainless steel, and other solid surface materials for their added durability and stain resistance. Bowls are available in Corian, Moenstone, Swanstone, Surrell, and others. The important thing to remember is to follow the manufacturer's instructions pertaining to the material of which your bowl is constructed. With some of the solid surface materials, scratches can be removed when lightly sanded because the color goes throughout the thickness of the material. To prolong the life and appearance of enameled cast iron sinks, clean the bowl immediately after use with a non-abrasive cleaner. Constant use of abrasive cleaners can eventually wear the finish down, making it much more porous and susceptible to stains. This can also happen with enameled, cast iron tubs over a long period. Don't allow fruit or vegetable juices or cleaning acids to stand on surface. An acid-resisting sink will safely resist lemon, orange, and other citrus fruit juices, tomato juice, mayonnaise, and other vinegar preparations if these are not permitted to remain more than a few hours. A regular enamel finish is not impervious to

acids. Teas and coffee grounds will also stain enameled surfaces, if allowed to remain very long. When cleaning the sink, use hot water and soap. Water and soap are not as hard on the enameled finish as strong cleaning solutions like washing soda or a gritty abrasive. If a cleaner is used, it should be one that specifically states that it is non-abrasive.

**Bathroom Sinks or Lavatory Bowls**
The same precautions mentioned above for kitchen sink care, pertain to bathroom lavatory bowls. Clean them often with hot water and soap. If a cleaner or cleanser is necessary, use one that is non-abrasive. Today, it is easy to eliminate the use of glass bottles and jars from the bathroom. This prevents the possibility of chipping the lavatory bowl if dropped. If acids or medicine spill on the surface, wash the spills immediately.

**Bathtubs**
Modern bathtubs and showers can be made from a myriad of materials ranging from the conventional enameled, cast iron and steel, to fiberglass, acrylic, and man-made materials such as cultured marble. Many one piece tub or tub and shower combination units are made from gel coated fiberglass or acrylic plastic. Never use abrasives on any of these materials. They can cause scratches to the surface. Usually they will clean with hot water and soap. If that is not sufficient, a cleaning product recommended by the manufacturer of the fixture, or your plumber, can be used to handle heavier cleaning tasks. With fiberglass and acrylic units, special polishes with no abrasives are available to protect their finishes, by sealing the pores in the material, which makes subsequent cleaning easier. When decorating the bathroom or repairing something near the bathtub, place a heavy cloth over every inch of the bathtub surface so paint, falling tools, etc., will not mar or chip the enameled surface. Do not stand in the bathtub with shoes as the dirt and grit in the soles will scratch or mark the enameled surface. Fiberglass and acrylic tubs should be cleaned with non- abrasive cleansers recommended by manufacturers.

**Toilets**
Toilet tanks and bowls are made of vitreous china and are impervious to ordinary household acids. If something more than hot water and soap is needed to clean them, apply a non-abrasive powder or cleaner recommended by your plumber. Many good bowl cleaners are on the market today. Most plumbers however, have found that the "blue water" continuous bowl cleaners tend to accelerate the deterioration of the rubber and neoprene parts in the tank, due to the chemicals they contain.
Stains or moisture at the base of the toilet bowl indicate that the joint or seal between the closet and its outlet have failed and should be reset immediately to prevent rotting of the floor, damage to the plaster of the ceiling below, and possible leakage of sewer gas into the home.

Seat bumpers should be replaced if worn. Defective bumpers may cause breakage of the seat or hinges.

If water continues to run into the closet bowl after the toilet is flushed, it is obvious that some part of the mechanism is out of order. When the tank has refilled, if water continues to seep into the bowl or if there is a low humming noise, this indicates leakage from the

tank. This leakage can occur from either the supply valve or the improper seating of the rubber tank ball or (flapper) on the discharge opening. A small amount of food coloring added to the tank water will help you determine whether the tank ball in the bottom of the tank is leaking. Add it to the water after the tank is filled. Watch for the coloring to seep into the toilet bowl, and if it does, the ball or flapper over the discharge opening is not water tight. If the rubber tank ball does not fit tightly over the discharge opening, a defective ball, irregular seat or bent lift wires may be responsible. If the ball is worn out, misshapen or has lost its elasticity and fails to drop tightly into the hollowed seat, it should be replaced with a new one. Sometimes the ball is covered with a slimy coating which can easily be wiped off. To replace the ball, shut off the water supply (a stop is installed underneath the tank where the water may be conveniently shut off at this point) and empty the tank or place a stick under the ball float lever-arm to hold it up, thereby shutting off the intake cock and preventing the tank from refilling. Then unscrew the ball from the lower lift wire and attach a new ball of the same diameter as the old one. (Note: some old tank balls swell from age and absorption of water.) If the collar or seat of the discharge opening is corroded or grit-covered, it should be scraped and sand-papered until it is smooth and forms a uniform bearing for the stopper. Straighten or replace bent lift wires so that the ball drops squarely into the hollowed seat.

A leaky, waterlogged float ball holds the supply valve open and does not completely shut off the water. If the rod which connects the tank float to the supply valve has become bent, it may prevent the float from reaching its full height, thus leaving the valve open and allowing leakage. This rod should be straightened and a little oil applied to the lever joints to insure smooth action. Sometimes the tank will not fill sufficiently or will fill to overflowing. These difficulties may be corrected without disturbing the supply valve by bending the rod attached to the tank float upward or downward. If the rod is bent upward, the water will rise higher in the tank, and if downward, the water level will be lowered.

An overflow tube or pipe is provided in the closet tank to take care of the water in case it should rise above its accustomed level which should be at least 3/4 of an inch below the top of the overflow. While there is not much danger of its becoming stopped up, it might be well to examine it occasionally to see that it is in working order. If water rises to the top of the overflow pipe an adjustment or new fill-valve assembly is necessary. Consult your plumber if in doubt.

**Shower Equipment**

Some Plumbing Codes, require the use of pressure balanced bath/shower valves to prevent scalding in new homes and remodeling. Your plumber can suggest the proper unit for your application. There is more potential for the scalding of a person showering if the pressure fluctuates. Most people aren't aware that young children and older persons can be scalded much sooner than adults. Lowering the water temperature at the water heater will minimize the potential danger at the tub spout or shower head and is the best preventive action which can be taken to prevent scalding. A small child doesn't have to soak in overly hot tap water to get scalded. Tragically, injury can happen literally in the blinking of an eye. 150 degree water can scald in just 1/2 second, 140 degrees scalds in just I second, but it takes four minutes for water at 120 degrees to scald.

*POINT OF CAUTION - - Never let a child bathe unattended, because of the danger of scalding and injury. In addition, always turn cold waater on first, followed by the hot water until the desired temperature is achieved. That way, no one is exposed to straight hot water.*

You need not rush to buy another shower head if the one you have suddenly gives off an uneven spray. It's probably clogged with mineral deposits which build up in the shower head and distort the shower stream. If the shower head holes are clogged, remove the face of the shower head, clean the back surface and free holes with a coarse needle. The latest shower heads on the market are all self-cleaning and need no such attention. The only positive preventive measure is investing in a water softener. When changing shower heads, wrap adhesive tape around the packing nut or pad the wrench jaws with a cloth so you won't mar the finish.

**Chrome Plating**
Chrome plating is a hard and durable finish that requires little attention except for the occasional washing with soap and water. Green spots may appear on chromium plating. If this happens, prevent the rust from spreading by scouring the spots with the same kind of powder which manufacturers recommend for enameled, cast iron fixtures. When the spots have been removed, apply a finish of wax. Your plumber will be glad to help you select a good cleanser.

**Water Heaters**
You can't get along without hot water. Therefore, take care of the source--the water heater. If you have a gas or electric water heater, keep the temperature dial setting at or below the suggested Factory Energy Savings Settings listed on the water heater. Above that mark means excessive wear on the water heater and the potential for scalding. The burner of a gas-fired water heater is easily accessible and should be checked by your plumber periodically to keep it clear of dust or sediment. The flame at full fire should be a light to dark blue. If the flame is more orange or yellow, the gas pressure or air flow needs to be adjusted. You can keep your water bills low by tempering all hot water as it is used. Letting the hot water faucet run on and on wastes not only water but fuel as well. With all water heaters, plan your hot water needs and you'll be delighted with the savings you get. All domestic water heaters are required to be equipped with a relief valve as a safety feature to prevent damage from excessive pressure and temperature. There is always danger that this valve may become frozen or corroded from long disuse. For this reason, it is advisable to trip the lever of this valve manually every two or three months to be sure it will operate freely if an emergency arises. Note: The discharge will be hot water that will need to be contained in a pan or bucket or allowed to drain to a floor drain.

**Leaky Pipes**
If you find a leak in your plumbing system, shut off the water supply and call your plumbing contractor at once. Water supply systems are under high pressure. Temporary repairs are only temporary and wrapping the pipe usually fails. Leaks must have immediate attention, since they can progress into a serious break in a hurry.

**Thawing Frozen Pipes**
Frozen plumbing pipes, although inconvenient, do not constitute an emergency. The emergency may come if the pipes are thawed with a blow torch, and if the open flame or the torch is allowed to come too close to combustible material, such as insulation, wooden joists or flooring. Another danger from the use of a torch arises when both ends of a pipe are clogged with ice and when the heat is applied in the center. The application of the heat of the torch at the center of the pipe is likely to cause the water to flash into steam potentially causing an explosion with disastrous results for the user of the torch. It is far better to adopt the slower and more conservative procedure of melting ice by the use of a blow dryer, or heat gun. Contact you contractor should this problem arise and they will assist you in a remedy for this situation.

**Preventing Frozen Pipes**
Before the cold freezing weather sets in, make sure that all the garden hoses outside your home are disconnected. Failing to do so can cause not only the hose but also the hose bib to which it is connected, to freeze and be damaged. This is especially important with anti-freeze hydrants. The hose must be disconnected to make the faucet freeze-proof. Failure to do so will trap water in the faucet body, which then can freeze. If the hose is disconnected, the anti-freeze faucet can properly drain, and this will prevent freezing. Water pipes which are exposed to freezing temperatures or drafts should be covered with insulation. Whenever possible it is best to drain systems not being used in severely cold weather. Small water pipes will freeze quicker than will waste or sewer pipes. Never leave a garage door open in severely cold weather, if there is plumbing in the garage. The cold and draft can freeze water lines in minutes. Pipes located in unheated basements or garages should be insulated with a commercial covering. When pipes are laid underground they should be below the frost line to prevent freezing.

**Noises in the Plumbing System**
In designing the plumbing system for a new house, a plumbing contractor will endeavor to make it as noiseless as possible. Manufacturers of plumbing fixings are making every effort to reduce the noise connected with the operation of their equipment, and contractors have been very successful in eliminating much of the noise formerly associated with plumbing systems. Because so much of the noise is due to water traveling at a high velocity, it follows that whatever can be done to reduce the velocity of the water will correspondingly reduce the noise in the system. It is for this reason that it is so important not to skimp on the size of the water supply piping. Larger pipe will not only provide a more adequate supply of water but will reduce noise. There are three general types of noises found in some of the older plumbing systems. These are water hammer, whistling and chattering. Water hammer is the thump in the piping heard when faucets or valves are turned off abruptly. It can usually be eliminated by the installation of an air chamber or short length of pipe in the wall where each supply pipe enters a plumbing fixture. In some cases, however, the ordinary type of air chamber will not prevent water hammer. In such cases, special devices known as shock arrestors should be installed on the main line near the meter or as close as possible to the cause of the noise. Sometimes water hammer is due not to the plumbing in the house in which it is heard but to a condition outside of the house, either along the water main or in a neighboring house. In

such cases, skillful detective work by an experienced master plumber is necessary to ferret out the source of the trouble and to plan corrective methods.

Chattering in the piping may be caused by loose pipes, by pipes rubbing against a metal projection, by worn faucet washers or looseness of other inside parts.
Whistling is caused by the speed of water flowing through piping which is usually too small. A pressure reducing valve will help as will a general straightening out of the plumbing system. Whistling is most common at bends and tees in the pipe.
In any case, bothersome noises should be noted and communicated to your contractor or plumber.

**Sweating Pipes**
"Sweating" pipes and plumbing fixtures in summer-time or during seasonal changes are not a sign of faulty plumbing. Due to condensation of water vapor in the air, beads of moisture will form in warm weather on any pipes and fixtures containing cold water. Normally, when not in use, the water and fixtures will warm rapidly to room temperature and the condensation will stop. When a closet tank or other fixture continues to sweat for hours after it has been used, it is a sign that cold water is continuing to flow through it, possibly due to an improper adjustment of the tank valve or a leak. Sweating pipes can be wrapped with an insulation material which prevents the condensation and formation of moisture.

**Odors in the Plumbing System**
The well-designed and correctly installed plumbing system is odorless. Odors are most likely to arise from leaks in the waste or vent piping or from traps which have lost their water seal. In an incorrectly installed system, there are, of course, many opportunities for odors to result from defects in the system, particularly if it is not properly vented.
Unusual odors should never be ignored. Such odors are often an indication that sewer gas is present. Sewer gas, while not always deadly, is noxious and capable of causing headaches and other minor illnesses. Sewer gas is foul smelling air and should be prevented from entering the house. If it is suspected that sewer gas is entering through a leak in the piping, a plumber will subject the system to a test either by means of smoke, water or oil of peppermint. The test will indicate the location of the leak.

**Where and How to Shut Off Water**
Knowing where and how to shut off water for the entire house or any part of it can be mighty important in an emergency, it is extremely important for all members of the family to know where the valves are and in which direction they should be turned to shut off the water. One way to identify the valves is to have a tag on each valve indicating its function. Valve identifying tags may be obtained from plumbing dealers.
Obviously, the most important valve in the house is the main shut-off valve for the entire plumbing system. This valve, generally located on the house side of the water meter, usually has a handle like a wheel. If it has not been used in many years, it may require a wrench to turn it. Because the easy operation of this valve in case of emergency is so important, it is advisable to place a few drops of oil around the valve handle once or twice a year. This will prevent the sticking action of corrosion. The shut-off valve may be the ground-key type with a small hole bored in its side for draining the pipes after the

water is shut off or it may be a drain and stop with a cap nut covering the drain opening. In either case, close the opening before turning the water off. Unless this is done, water will spurt with force. In addition to the main strut-off valve at the meter, the well plumbed house has individual shut-off valves on the branch lines leading to individual fixtures, groups of fixtures or equipment such as water heaters, water softeners, automatic washers, etc. Many contractors, when installing plumbing fixtures, provide separate strut-off valves or stops for each individual fixture. These will be found on the supply lines below the fixture. These individual stops are a great convenience to regulate water flow in case of repairs as well as emergencies.

**Understanding Backflow Prevention Programs**
Some agencies, through the enforcement of the Federal Clean Water Act, were given the task of protecting our potable water supplies. It clarified that water purveyors must protect the public water supply from contamination by an outside source, through implementation of a Backflow Prevention Program. Conformance to these state requirements minimizes the possibility for the water using public to inadvertently contaminate or pollute the domestic water system or the public water supply. This program requires the installation of a backflow prevention device in the plumbing system where the possibility of a cross connections may take place. A cross connection is an arrangement of piping or faucets which allows the potable water supply to come into contact with a contaminant. An example of a potential cross connection is a lawn irrigation systems, where fertilizers, chemicals or other contaminants can come into contact with the potable water supply through the irrigation heads. There are several types of backflow prevention devices used today. The type of device is determined by the degree of hazard presented by the possible "cross connection".

**Testing of Backflow Prevention Devices**
In the case of a residential or commercial irrigation system, a reduced pressure principle backflow preventer (RP device or RPZ) is required between the potable water supply and the irrigation system. These devices are not only required by law, but also due to the requirements of the backflow prevention program the devices are required to be tested annually by a certified backflow prevention tester. The annual test is to ensure that the device is working properly and is a requirement of the areas' cross connection control program. Most licensed plumbing contractors have one or more certified testers in their employ and will be happy to provide this service for you. Leakage from a backflow preventer is normally attributed to foreign matter lodging on the seating area of the internal check valve seats. The majority of the time this can be corrected by simply flushing the device which will dislodge any loose particles. However, the spillage from the dump port does provide a "warning signals that the device is in need of maintenance. The needed service should be performed by a Certified Backflow Prevention Tester.

**Miscellaneous Suggestions**
Sump Pump If you have a sump pump be sure that it is always in good operating condition so that it will be ready to function when it is needed. Oil it carefully in accordance with the manufacturer's instructions. Make it operate occasionally by tripping the lever after filling the basin particularly with water. Unless you do this every three or

four months, there is danger that corrosion may cause a sticking of the shaft when operation is required.

Backwater Valve The function of this valve is to prevent the sewer from backing up into the house during heavy rains. Most backwater valves operate automatically. A valve with a butterfly action closes against the sewer on the house side. Sometimes however, debris lodges against the seat of the valve so that it cannot close tightly. Removing the lid, cleaning the seat, and greasing the hinge pin on the valve gate annually will guarantee that the valve will operate as expected when it is called upon to prevent the water from coming into your basement. With the manual type of valve it is best to operate this valve manually every six months in order that (1) all members of the family may be familiar with the location of the valve with its function, and where the wheel for manual operation is stored; and (2) in order that the manual operation may keep the valve free from corrosion and lessen the chances for debris interfering with the valves closing.

**Preventing Sewer Clogs and Back-ups** **Once your current plumbing system is disturbed or amended it will perform and act differently than in the past. The addition or deletion of fixtures, rerouting of supply or drain lines, or replacement can all have an impact on how your overall system performs. It is never a good idea to flush solvents, grease, oil, large items, or feminine products down your sewer system, even if you have done so in the past. These items can cause clogs and can be very costly to remedy. Your plumbing system is an intricate, delicate, and functioning system of your home and the community. Taking care of your internal system will ensure a healthy system for years to come.**