

SALVAGE & OVERHAUL
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SALVAGE EQUIPMENT

Specific salvage equipment is carried on all engines in our department. The truck carries the largest inventory of salvage equipment and tools. Common hand tools such as hammers, screw drivers, and wrenches may also be used in salvage operations. Members are expected to know the inventories of their apparatus as well as the truck. Most of the small salvage tools are located in a designated tool box called the salvage box.

Automatic Sprinkler Tongcs or Wedges

The flow of water from an open sprinkler can do considerable damage to merchandise on lower floors as well as on the fire floor itself after the fire has been controlled. By proper application of the sprinkler tongcs or wedges, the firefighter can effectively stop the flow of water from the sprinkler. This will reduce the spread of water damage and will allow for the clean up of standing water already released by the sprinkler head.

Submersible pump

The submersible pump is used to remove water from areas such as vaults, basements, elevator shafts, etc.

WAP Turbo 1001 AE

The WAP Turbo is a water vacuum with a self-contained pump. The vacuum can be operated in one of three modes controlled by a rotary switch on the front of the unit: vacuum only, automatic empty (vacuum and pump), and pump only. This vacuum has a 1 1/2 inch male hose outlet located in the rear of the unit. The pump has a maximum capacity of 60 gallons per minute and it can pump up to 100 feet of 1 1/2 inch hose. The ability to pump as well as vacuum makes this a very effective water removal tool. When used with a water collecting device, it can replace the traditional water chute in some applications. It's equipped with a corrugated hose, squeegee head and wands. The WAP has a household three prong electrical plug with a built-in ground fault interrupter for safety. It requires a 115 volt AC source and is rated at 1,500 watts. Maintenance consists of rinsing the filter screen; hose, wand, and stainless steel tub clean, then allowing them to air dry.



Figure 1 WAP water vacuum

Carryalls

Carryalls are canvas bags made from old salvage covers. They are 3' x 3' x 2' in size and are used to carry debris and damaged merchandise from a structure. They may be used as a water basin to immerse small burning objects.



Figure 2

Carryall

Floor Runners

Damage to costly floor coverings can be minimized by the use of floor runners. Firefighters can track mud, soot, and wet debris into or out of a structure during overhaul operations. Floor Runners are usually 30 inches wide and 18 feet long, and may be constructed from old salvage covers. They can be rolled from the entrance of the structure toward the area of overhaul. Floor Runners are folded to shape in the corners, and overlapped when more than one is needed.



Figure 3 Floor Runner

Salvage Covers

Salvage covers are used to make chutes, drains, catch alls, catch basins, and improvised sumps as well as to cover objects. There are other applications as well. Salvage covers may be constructed of polyethylene, rubberized canvas (greenback), and treated canvas. The truck company currently carries treated canvas salvage covers, but we have used all three types of covers in the past. Salvage covers in the Escondido Fire Department are 12 feet by 18 feet. They have grommets near the corners and along the sides, but these **are not** spaced 16 inches on center.

Polyethylene covers are lightweight, resistant to mold and mildew, and are inexpensive. Unfortunately, they are easily damaged by hot materials. Rubberized canvas covers are durable, but heavy and expensive. Treated canvas covers are durable and more susceptible to mold and mildew. Both the rubberized canvas and treated canvas covers are more expensive than the polyethylene.

Salvage Cover Maintenance

When salvage covers are placed on the apparatus, they should be refolded every **30 days**. Refolding helps prevent cracks from forming at creases. Salvage covers should not be stored with sharp objects and, when used on the fire ground, should not be pulled or drawn over sharp edges. They should not be placed on the ground over broken glass, other sharp objects, or walked on unnecessarily.

Plastic Sheeting

Plastic sheeting has largely replaced salvage covers for covering objects to prevent water damage. The sheeting is very good for covering openings in roofs, walls and windows also. It is inexpensive and considered disposable. We purchase plastic sheeting in rolls 100 feet long, 10 feet wide, and 6 millimeters thick. Two rolls are carried on the truck: one on a dispenser, and the other one new in a box. Plastic sheeting is not as good for constructing the objects traditionally made with salvage covers.

Squeegees

Squeegees are the basic water removal tool in the fire service. They are very effective on smooth surface floors, especially if used together. The ends should be overlapped when multiple squeegees are used.

MISCELLANEOUS SALVAGE EQUIPMENT:

Padlock

Padlocks are used to secure areas where an existing padlock must be cut. Our padlocks are opened by a #4 City key.

Golf Tee

A golf tee may be used to plug a small leak in a hose or pipe.

Barricade Tape

Barricade tape is used to restrict access to an area.

Circuit Tester

The circuit tester is used to determine the electrical status of an outlet in a building. No Fire Department equipment shall be plugged into ungrounded or two-pronged receptacles.

Staple Gun

The staple gun is used to attach plastic sheeting to surfaces and over openings.

Sprinkler Heads

Broken, leaking or fused sprinkler heads will be replaced by Fire Department personnel, and the sprinkler system will be restored to operational condition. Sprinkler heads will be obtained from the building occupant before using department heads.

S-Hook

S-hook is used to hang items.

Hay Hooks

Hay hooks are used to hook and pull items.

Twine

Twine is used to tie off items for various tasks.

SALVAGE OPERATIONS

One of the largest hindrances to effective salvage work is a lack of staffing. As stated earlier, salvage operations are most effective if initiated during fire attack. If there is not a unit available on scene to begin salvage operations, then unnecessary damage will occur. Our job is to provide the best customer service possible, even if the situation is not ideal.

- In multistory buildings, salvage is normally started on the floor below the fire floor. On single story units, efforts should be made to protect the items most at risk of damage first.
- Valuables should be placed in drawers. Highly valuable items should be given to an officer for proper disposition. **No matter the intent, firefighters should never place valuables in their pockets!**
- Records are vital to businesses, and a large number of businesses that lose their records in fires never reopen. File cabinets and computers are key areas for salvage operations in businesses as well as homes.

Note: The following techniques are effective; however creativity and common sense are encouraged as these evolutions are applied to actual incidents.

METHODS OF FOLDING AND SPREADING SALVAGE COVERS

Palo Alto Accordion Fold

1. Place the cover on a clean surface (working side up).
2. Turn all corners in about 10" to 12".
3. Two firefighters take position opposite each other at each end of the cover.
4. Place outside hand flat on the end of the cover about 3 feet in; with the inside hand, reach over and grasp the corner of the cover and lap it over.



Figure 1

5. Place outside hand flat on the end of the cover about 18 inches in; with the inside hand, reach over and grasp the corner of the cover, then bring it over to the edge of the seam. **(Figure 1)**
6. Go to the opposite side of the cover and repeat steps 5 and 6. This will bring both sides of the cover to the center fold.
7. Use a push broom to remove air and wrinkles from the cover before further folding. **(Figure 2)**



Figure 2

8. With firefighters opposite each other at one end of the cover, place outside hand flat on cover, with thumb underneath, 6' to 8" from the end. Place inside hand under cover, with palm up and thumb on top, 6" to 8" from your opposite hand. **(Figure 3)**

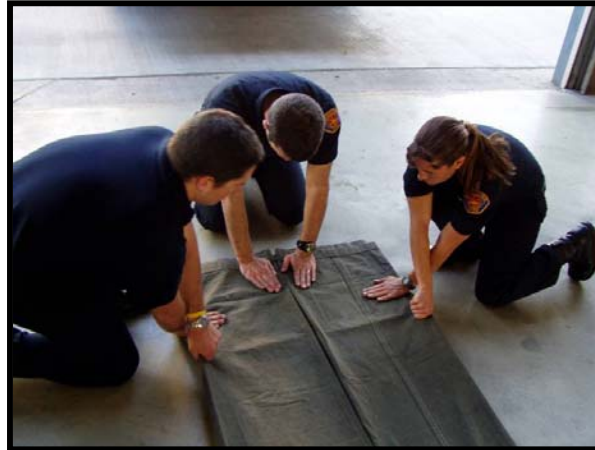


Figure 3

9. Bring inside hand over outside hand; bring even with the edge of the cover.



Figure 4

10. Third firefighter places hands in the center of the cover to keep the cover from wrinkling in the folds.
11. Keep thumb under the cover on outside to keep the folds even.
12. Repeat operations until the cover is folded. (**Figure 4**)
13. Place rubber bands over the ends to keep the folds in place during transport and storage.

One-Person Throw

1. Place the center of the salvage cover over either forearm, pleat towards your body; grasp the bottom fold with the fingers of that hand.



Figure 5

2. Reach in next to your body with your other hand and grasp the three top folds between your thumb and fingers, thumb down. Grasping the three top folds ext to your body in this manner will give leverage and weight to the throw. (**Figure 5**)
3. Swing your arm back up and over your shoulder, with the three folds falling over the back of your hand.

4. Throw the cover over the material to be covered by bringing your hand forward and keeping your arm stiff while throwing. The cover should be thrown in an arch. The forearm of the arm holding the balance of the cover must be raised during the throw to clear high piles. The fingers of that hand may be used as a brake while the cover is paying out to keep from unfolding the cover too soon.
5. With another firefighter at the opposite end, balloon out the sides of the salvage cover.
6. Tuck the cover in at the bottom. This is called "bagging." (**Figure 6**)



Figure 6

Two-Person Counter Pay-Off

1. One firefighter holds the cover over both forearms, with the pleat towards the body, grasping the bottom folds with the fingers of both hands.
2. The other firefighter grasps the top folds with both hands and walks backward until the length of the cover is reached. The cover must not touch the floor. Figure 7
3. Both firefighters raise the cover over the counter or other material and gently lower the center fold of the cover to the center of the counter.
4. Both firefighters open up the cover and drape it over the sides of the counter.
5. Both firefighters grasp the bottom edge of the cover and bag the cover to the bottom of the counter. Repeat bagging on the other side(s). The cover must be kept clear of any aisles. (Figure 8)



Figure 7

Plastic Sheeting

Plastic sheeting is actually preferred instead of salvage covers for protecting items from water damage. Obviously, it should not be used if it is likely to contact hot objects. The roll can be taken on the dispenser to the area that salvage operations are being performed. The amount of sheeting needed to protect the items can be cut to the size needed. The items are covered using the same basic techniques as a salvage cover. The roll can also be used like the two-person counter pay-off. The plastic sheeting is disposable, so it can be left in place until the building occupants want to remove it (if we have not done so already).

Removal of Salvage Cover from Counters

1. Clear the cover ends and sides.
2. Fold the sides over to the opposite side of the counter.
3. Two firefighters take positions opposite each other at the same end of the counter.
4. Each firefighter grasps the end of the cover and raises it clear of the counter.
5. Both firefighters walk to the other end of the cover, carrying the cover at arm height, until the cover starts to drag. Figure 8



Figure 8

6. Both firefighters repeat step 5 from the other end of the cover, overlapping the ends approx. 12".
7. Repeat steps 5 and 6 until the cover is approximately 8" wide.
8. One firefighter places a portion of the folded cover over one shoulder, turning away from the counter at the same time.

9. The firefighter on the other side of the counter grasps the folds, raising the cover clear of the counter, and drapes the folds on the other firefighter's opposite shoulder. Figure 9
10. The firefighter carries the cover to a place suitable for dumping the debris and refolding the cover.



Figure 9

Removal-to-Quarters Fold

1. One firefighter at each end grasps the center of the cover.
2. Raise the cover so that the edges are off the ground. Shake the cover from side to side to remove the debris. The cover is folded in half at this point.
3. After shaking the cover several times, place the cover on the ground in a clean location. Fold from the closed edge to the open edge. Figure 10 and 11
4. Fold one end of the cover approximately 2 feet from the opposite end. Fold the cover loosely from the closed end to the open end and place the cover on the apparatus.



Figure 10



Figure 11

Leak-proof Folds and Water Chutes

Leakproof folds are used to join two covers together. Water chutes are used primarily to catch water and channel it to another location. In most instances, the water is run-off from firefighting efforts or from a broken sprinkler head. Usually, the water is channeled outside of a structure or to a drain.

Leak-proof Fold

1. Two firefighters spread the first cover, working side up.
2. Turn the cover edge back 2 to 3 feet on the side where the other cover is to be used.
3. Spread the second cover, working side up, depending on the application.



Figure 12

4. Bring the seams of the first and second covers together by pulling the second cover in place. Figure 12
5. Firefighters take positions on the first cover, facing the second cover. Figure 13
6. Grasp the edges of both covers, fold them over 3" to 4", then roll them until the slack is taken up. When used for a water channel or a chute, the roll must be made in the direction of water travel to reduce the chances of the leak-proof fold unraveling.



Figure 13

Water Chute with Pike Poles and Salvage Cover

1. Spread the salvage cover out, working side down. Place a 12' pike pole on each long side of the cover, approximately 4" in from the edge. A chute can also be made by placing the poles on the short sides of the cover. Figure 14



Figure 14

2. Insert the point of the hook into the top grommet and fold the end of the cover down through to clear the hook.
3. Lap the cover over the poles. Expose at least 6" of the pike pole for a handle. If necessary, turn the cover up to obtain the desired length.
4. Roll the pike poles and the cover towards the middle, an equal distance apart, until the desired width is reached.

5. Turn the chute over so the working side of the cover is up. Place the chute into position. Fasten the upper end of the chute by placing the pike pole hooks over ladder rungs, high furniture, pipes, or by using "S" hooks, nails and a cord.
6. The chute may be directed out of a window, door or pre-drilled hole placed in the floor by the firefighters. The chute also may be directed into a sink, bathtub, or toilet bowl. Figure 15



Figure 15

Stairway Drain

1. Determine the length of the stairway needing protection. Select the number of covers needed to cover the area.
2. Lay out the covers, working sides down, and make a leak-proof fold between each cover. Drains made with multiple covers may be overlapped two to three feet instead of using the leak-proof fold, but the overlap must not occur on a landing.
3. After making the leak-proof folds, roll the sides of the covers an equal distance towards the middle until they are approximately half the width of the stairway.



Figure 16

4. Turn the cover over so that the working sides are facing up. Figure 16
5. Carry the covers to the stairway. This will require one firefighter for each leakproof fold and one firefighter each for the ends of the drain. Place the covers in position. Figure 17
6. Spread the upstairs end of the cover so it will catch water falling through to the stairway.
7. Place traffic cones, or other objects, to "bank" the drain at landings of the stairway. This will prevent the water (due to momentum) from spilling over the rolled edges.



Figure 17

Catch-All and Catch Basin

Catch Alls and Catch Basins are primarily used to contain water or debris. Catch-Alls for Debris are most often utilized to cover a floor and collect any debris that may fall. Catch Basins are most often utilized to contain water that is leaking through a ceiling onto a floor below. These are effective tools, especially when coupled with the WAP water vacuum. A three-sided Catch-All is often used during chimney fire evolutions.

Catch Basin Using Salvage Covers

1. Place materials, such as chairs, couches, benches, foot stools, etc., in position forming a circle or square.
2. Secure items in position by tying them together with a rope, rope hose tool, or cord. Figure 18



Figure 18



Figure 19

3. Place salvage covers over the assembled material, allowing the center to bag inside. Do not leave a hollow space beneath the cover on the inside. Allow the cover to drape over the outside of the objects. Tuck under the outside edge and secure the cover if necessary. Figure 19

Catch-All for Debris

1. Spread the cover.
2. Firefighters on one end of the cover roll the edge in 12" to 18", or as the size of the catch-all dictates.
3. Firefighters repeat step 2 on the other end of the cover.
4. Firefighters repeat step 2 on one side of the cover and make envelope folds in the corners. Figure 20
5. Firefighters repeat step 4 on the other side of the cover. Figure 21

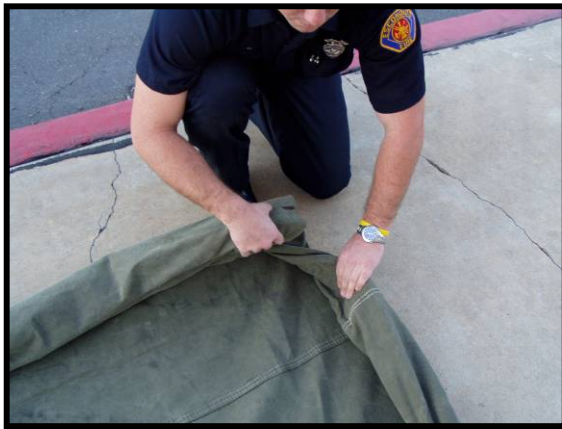


Figure 20



Figure 21

Improvised Sump

1. Select a location for the sump. Consider whether the sump will be used for water supply, hazardous material cleanup, etc.
2. Form ladders from the engine or truck into a triangle and secure them together with rope or hose tool. If using the ladders from an engine, the 24' extension ladder will need to be separated. To separate the ladder, remove the fly section from the bottom of the bed section. The halyard will need to be removed. Sometimes one or both of the stops will also need to be removed. You need to know the equipment on your assigned apparatus. Figure 22



Figure 22

3. Using two salvage covers, working side up, make a leak-proof fold.
4. Place the salvage covers over the ladders, allowing the center of the covers to sag inside. Make certain the covers are touching the ground. Allow the covers to drape over the ladders and tuck the outside edges under the frame. Figure 23



Figure 23

OVERHAUL

Safety

While salvage operations can occur simultaneously with fire attack, overhaul operations are initiated after the fire has been knocked down. Overhaul operations begin while the atmosphere in the building is still contaminated. Full personal protective clothing must be worn (including SCBA). The use of protective gear must continue until the atmosphere is tested and found not to meet immediately dangerous to life and health standards. Currently that means that oxygen concentrations are between 19.5 % and 23%, and that carbon monoxide measures less than 25 ppm. However respiratory protection may still be needed for particulate hazards (especially asbestos).

Because overhaul work is physical, crews should be rotated. A good rule of thumb is to assign crews not involved with the initial attack to overhaul. If the overhaul is extensive, then crews should be further rotated. Crews that are severely fatigued are more likely to be injured. Firefighters need to be aware of the operations near them, so that other firefighters are not inadvertently injured by tools or equipment. Because electricity is secured early in most fires, portable lighting should be deployed to illuminate the operational areas. Designating a debris pile and eliminating trip hazards as much as possible, will also contribute to safety during salvage and overhaul operations.

Fire causes damage to both contents and structures. In a way, we are in a battle for the integrity of the structure at every fire. The process of fire extinguishment also causes damage to both contents and structures. The excess water may be absorbed by both the building and its contents. Each gallon of water absorbed adds almost eight and one half pounds to the building. It is probable that a building containing an extinguished fire may have thousands of pounds of extra weight load. This extra weight is even more dangerous if the structural members have been weakened by fire. Overhaul operations are inherently dangerous.

To illustrate this point, on March 13th, 2004 a fire was discovered in the basement of the Ebenezer Baptist Church located in Pittsburg, PA. The fire eventually destroyed the sanctuary of the one hundred year old church. After the fire was contained, a group of fire fighters went into the lobby of the church to perform overhaul operations under the direction of a chief officer. The bell tower collapsed killing two firefighters and injuring 28 more. Understand that this is not a critique of the Pittsburg Fire Department, but an example of the inherent dangers of overhaul operations.



Figure 1 Ebenezer Baptist Church

Building Evaluation

As stated earlier, fire buildings need to be evaluated for structural stability. Some areas and items to inspect are:

1. Weakened floors due to floor joists and sub-floor having been damaged or destroyed by fire.
2. Walls out of plumb.
3. Weakened structural members
4. Weakened ceilings and wood coverings
5. Veneer wall tiles or bricks weakened
6. Stairways
7. Debris or rubble on the floor
8. Wet, icy, or slippery area
9. Chimneys
10. Overhead signs, mansards or overhangs
- 11.

Crews should be very cautious operating under overhangs or mansards. These often contain void areas, which can harbor hidden fire, causing a collapse.

Overhaul Equipment

Many of the tools used for salvage operations are also used for overhaul operations. Pike poles, rubbish hooks, and pick headed axes are common hand tools. Portable lighting is critical, and various hand and power saws may be used as well. Two notable tools are the thermal imagers and the "Thermo-Spy" infrared scanner. Information on these devices can be found in Section 1204.00 of this manual, pages 1 and 2 of 9. The primary overhaul use for both tools is the detection of hidden fire.

Overhaul Operations

Overhaul operations consist of:

1. Locating, and extinguishing remaining fires
2. Placing the building, its contents and the fire area in a safe condition
3. Recognizing and preserving evidence of the cause and origin of the fire.

Overhaul generally follows salvage operations, although they may be performed simultaneously.

Locating and extinguishing hidden fire

Proper overhaul involves a systematic handling of contents, merchandise, and debris to accomplish many purposes. One of these purposes is locating hidden fires so they may be extinguished, preventing further damage. Proper overhaul is needed to prevent the fire from rekindling. There may be times when a firefighter should be detailed to watch a fire building.

Successful overhaul should follow a step-by-step procedure or pattern to be most efficient. Unnecessary damage to the building and its contents can be avoided by removing water soaked materials immediately. In many cases, items can be removed from the building for final extinguishment, as is commonly done with mattresses and stuffed furniture. Overhaul should proceed from the top floors down, from the interior rooms outward, or from a number of entrances simultaneously to eliminate additional damage as debris is removed from the area.

Making The Building And Fire Area Safe

The fire department must be concerned with removing dangerous structural conditions for the safety of their personnel and to protect the public. It may be necessary to shore up ceilings or interior walls, protect any holes burned in floors or stairways, check the integrity of stairs or ladders before use, and guard any sumps, open tanks or mantraps. Additionally, holes in walls and roofs need to be covered with either plastic or wood sheeting. Signs, overhangs or marquees that have been damaged or weakened should be removed. Consideration must be given to roof mounted equipment such as air conditioning and heating units, cooling towers, or water tanks that are causing stress or possible collapse.

The responsibility to actually remove larger hazards like dangerous walls or items which are creating an imminent danger to citizens on sidewalks or roadways, or to personnel performing final overhaul and mop-up operations, belongs to the fire department. The department should seek assistance from other governmental departments or agencies to provide the heavy equipment required. Inter-departmental coordination will be necessary since cranes, bulldozers or other equipment may be required.

The fire department will generally be concerned only with the safety aspects and will have the debris removed by the owner. Once the property has been turned back to the owner, the fire department is no longer responsible for removing dangerous conditions. The fire department should point out such conditions, recommend, or in some cases for the public welfare, order their removal and assist in any way in directing the safe removal by the owner.

The fire department must also see to it that proper protection is provided to keep the public out of unsafe areas. During immediate operations it may be necessary to isolate an area with barricade tape. The Public Works Department may be solicited to provide barricades, traffic cones, signs and warning flashers. Prolonged investigations may require site security. Once the property is released back to the owner, site security may be required for public safety.

Restoring Sprinkler and Standpipe Systems

Firefighters should have a working knowledge of sprinkler equipment and understand their functions. They must be thoroughly familiar with the particular systems in their district in order to utilize them effectively during a fire, or to assist when a breakdown occurs. Sprinklers can be an aid to fire departments by extinguishing or controlling fires. However, buildings may be damaged or deluged with water if the control valve is handled improperly. Sprinkler valves may be closed to prevent water damage, but this must be under the direction of an officer. A firefighter or responsible plant personnel should be assigned to stand by at the closed valve.

Sprinkler equipment should always be placed back in service immediately after a fire has occurred. Fire Department personnel may replace fused heads at the direction of an officer. Restoring the system will afford protection against the possibility of another fire or a rekindle occurring. A fire officer should ensure that the alarm system is reset. Overhaul operations should through and complete despite the presence of a sprinkler system.

Standpipe systems may be either wet or dry. Wet-pipe systems are generally considered for use by the occupants. Wet pipes contain water under pressure supplied by piping from an adequate water source. Restoring wet systems is the responsibility of building management although fire department supervision and recommendations are welcomed. Although dry-pipe systems are similar in appearance, they are designed to be supplied by fire department engines through siamese connections. When fire department personnel use dry-pipe standpipes to deliver water under pressure to upper floors, it is their responsibility to drain the system, close all valves and restore all outlet caps. In many building the sprinkler and standpipe systems are combined. In our area this results in a wet-pipe standpipe that may be supplied by fire department engines. These systems must also be restored after use.

Controlling Water Service

Water damage is usually associated with hose lines, sprinkler systems and other fire control devices. Sometimes, water damage is the result of a failure of the domestic water system. Control of water services may be necessary to reduce water damage. Generally the best practice to control domestic water flow is to close valves as near the leak as possible. Most plumbing fixtures (sinks, lavatories and toilets) are supplied with water through wall-mounted valves installed under the fixtures. Water systems in large structures are usually equipped with valves that can be used to control leaks in affected sections or floors. Since sectional control valves are seldom labeled and often difficult to locate, maintenance personnel should be consulted. Most structures, large and small, are equipped with master control valves at the point where the domestic water supply enters the structure. These valves may be installed above ground or in a box or pit near the structure.

Water meters are usually found on the building or street side of residential structures. Most meter installations incorporate a valve on the street side of the meter. Valves are installed at intervals in street mains; utility crews can isolate sections of street main systems to control water leaks that cannot be controlled by other methods.

Recognizing And Preserving Evidence Of The Fire Cause And Origin.

One of the major aspects of overhaul is recognizing and preserving any evidence of the cause and origin of the fire. Proper overhaul will permit most evidence to remain untouched and undisturbed and will also permit the safeguarding of other evidence that must be removed. A routine system of overhaul helps to determine the cause of the fire, pinpoints the origin, and permits the removal of items, which could cause recurrence.

Chimney Fires

Chimney fires present an incident where salvage and overhaul operations are very closely linked. Chimney fires come in two varieties, the classic flue fire, and a structural fire in the chimney assembly. Chimneys themselves come in two basic types: masonry and "zero clearance". A masonry chimney consists of a clay pipe flue liner surrounded by other masonry, typically brick or rock. If the masonry portion is reinforced with steel and concrete, they are generally very safe. In fact, these chimneys are often the only structural members standing after a total loss fire. If the masonry is not reinforced, these chimneys are dangerous, and have been known to collapse during overhaul. "Zero clearance" fire places consist of a double wall sheet metal pipe and fire box. These are often set in a wood frame with as little as a quarter of an inch of clearance between the fireplace and the structural members. These may be covered with stucco, siding, or brick veneer.

A flue fire is caused by a build up of flammable deposits (especially creosote) on the walls of the flue. These flammable deposits can ignite resulting in an impressive fire. Extinguishment is simple, but the hearth should be covered to prevent damage.

A small amount of water can be delivered into the fire box. The resulting steam will be carried by convection currents up the flue and extinguish the fire. A dry chemical fire extinguisher may also be used in place of the small hose stream in the same manner. The flue fire may extend to the surrounding construction if mortar is missing from joints. However, a fire in the surrounding construction is much more common with the "zero clearance" fire places. Through settling, excessively hot fires, or poor workmanship, a gap can occur in the construction. This allows a fire to occur in the construction surrounding the fireplace assembly. Salvage covers should be in place prior to extinguishing the fire. These fires often require extensive disassembly of the structure and fireplace assembly. Water may need to be applied from the roof or top of the chimney in this situation.

Releasing The Premises

After overhaul activities are completed, releasing the premises back to the property owner is usually in order. This is a simple, yet formal, procedure and should be done in the presence of a witness. This release may only involve the property owner, but in some instances, other persons are involved. For this reason, public relations play an important part in making the proper release. Tactful, but firm recommendations should be made to the correct persons, and the utmost cooperation should be practiced. The following is a list of persons who may be involved and the fire department's responsibilities to them.

- The owner and occupants
Advise about conditions, especially any remaining unsafe conditions.
Recommend necessary precautions.
- Utilities
Give full cooperation.
Recommend necessary precautions.
- Other authorities
Cooperate with law enforcement representatives.
Cooperate with City officials.
Notify proper authorities of suspicious fires.

Loss Prevention And Customer Service

As stated before, we are in the business of minimizing loss. Often, we work with other agencies such as utility companies, the Red Cross, or the police department on the scene of emergencies on behalf of the property owners or occupants. All firefighters must remember that any fire is a very traumatic experience for the property owner or occupant. Effective salvage and overhaul practices will result in good customer service.