

RESTORATION

R E P O R T

MANAGING A WATER LOSS 101: Skills To Keep You From Getting Soaked

Part III

(In Part II of this three part series, we described how high velocity air movers and dehumidifiers save time and money when used correctly in the drying process. We explained that using these pieces of equipment correctly involves balancing the number of pieces used together. In Part III, we will explore how to estimate the number of high velocity air movers and dehumidifiers required for beginning the drying process.)



Before restoration service providers and insurance professionals can hold a constructive dialogue about the cost of equipment, each must understand the amount of airflow and dehumidification needed to efficiently dry a structure. Without this understanding, the ensuing conversation can deteriorate into “Just trust me” from the service provider and “Too much equipment” from the insurance professional.

Air Movers

In Part II of this series, we stated that efficient drying requires laminar airflow, a concentrated air stream along a boarder (e.g. floors, walls, and ceilings). To estimate the number of air movers required to start the drying process, follow these steps:

- Measure the length and width of all wet surfaces (in feet)
- Figure the mathematical area (square feet) by multiplying the length by the width measurements

Next, apply the following rules to estimate the number of air movers needed:

- Place one air mover for the first 250 sq. ft. of wet materials
- Place two air movers for the first 500 sq. ft. of wet materials
- Place one additional air mover for each additional 300 sq. ft.

Note: Estimate each room separately unless an opening larger than a double door connects adjacent rooms.

Dehumidifiers

One of three methods may be used for estimating the number of dehumidifiers required to begin drying a structure. Method one assigns 80 pints of dehumidifier capacity for each pair of air movers. This method is relatively simple since dehumidifier manufacturers rate their dehumidifiers by the number of pints the equipment can remove from the air each day. Simply add the number of air movers and multiply that number by 80 pints to find the total number of pints of dehumidification necessary.

Method two assigns 2500 BTU's of dehumidifier compressor capacity for each air mover. Dehumidifier manufacturers rate a compressor's size in British Thermal Units (BTU's). Again, add the number of air movers, and multiply that number by 2500. Then, add the BTU ratings of the dehumidifiers to be used. The sum of the BTU ratings must be at least as large as the product of the number of air movers and the BTU's per air mover.



**Tornados in
Minnesota**

State of California

**Building
Relationships**

MANAGING A WATER LOSS 101 (continued from Page 1)

Method Two Equation

Dehumidifier capacity (in BTU's) \geq # of air movers x 2500 BTU's per air mover

Example

We have installed six high velocity air movers. How many dehumidifiers will balance the drying system?

Dehumidifier capacity \geq 6 x 2500
Dehumidifier capacity \geq 15,000 BTU's

The capacities of three ServiceMaster dehumidifiers are as follows:

60 Dehumidifier - 4800 BTU's
110 Dehumidifier - 5500 BTU's
200 Dehumidifier - 12,700 BTU's

Given the capacities above, configure the dehumidifiers for optimum drying.

#	Type of Dehu.	Total BTU's	Comments
1	200	12,700	Inadequate Dehumidification (Secondary damage will begin to occur unless either an air mover is shut off or another dehumidifier is added.)
3	60's	14,400	
2 & 1	60's & 110	15,100	Excellent balance of air movement and dehumidification.
2 & 1	110's & 60	15,800	
3	110's	16,500	
1 & 1	200 & 60	17,500	More dehumidification than required (Equipment rental money will be wasted unless either the dehumidifier configuration is changed or an additional air mover is placed into the environment. The latter will speed drying.)
1 & 1	200 & 110	18,200	
4	60's	19,200	

There is a tool that facilitates method three, which will be described later in this article. Method three matches a dehumidifier's ability to process a certain volume of air with the specific volume of air in a given room or building and the number of times which that air needs to be processed in order to dry it. Since air carries the water that we want to remove from the wet structure, we can accurately estimate how much dehumidification each situation will require by asking two critical questions. The first question is "How much air needs to be processed?" The second question is "How many times must it be processed in a given amount of time?"

Answer the first question by measuring the air space, the height, the width and the length of the room. Remember to add the spaces between walls, crawl spaces, etc., if those areas are wet and will be opened up to the drying process. We read the product of the height, width and length in cubic feet of air to be dried.

Now that we know how much air the room contains, we must address the second question which is, "How many times must the air be processed?" Each loss site may contain a different amount of water. Furthermore, a carpet can hold more water than concrete block or a 2x4 stud, and each will allow the water in it to evaporate at a different rate.

Low-porosity substances like vinyl, plywood or structural wood allow water to evaporate into the air slowly. Fewer dehumidifiers are required to keep up with this slower rate of evaporation, processing all of the air only once an hour. Semi-porous materials like drywall allow water to evaporate more quickly, and more dehumidifiers are required to remove the additional water in the air, processing all of the air twice an hour. Water evaporates very quickly from highly porous materials like carpet and carpet cushion. An even greater number of dehumidifiers must be placed to handle the large amounts of water evaporating from these surfaces, processing the air three or more times an hour. Assess the types of materials that are wet and decide the number of necessary to process the wet air. By multiplying the amount of air (in cubic feet) by the number of times an hour the air must be processed, the total amount of air that must pass through a dehumidifier in an hour to dry the environment can be estimated.

Now, all we need to know is how much air each dehumidifier can process in a given amount of time. Given that manufacturers rate their dehumidifiers in cubic feet per minute (CFM), we can now estimate the exact number of dehumidifiers required to start drying a specific water loss site.

Method three, though complicated, estimates equipment needs more accurately because it considers the wet materials in the estimating process. Earlier we hinted that a simple tool makes using method three easier. The Dehumidifier Calculator requires only that one measure the room and assess the structural materials. The estimator uses the slide rule calculator to figure the volume of air. The Dehumidifier Calculator then points out the number of dehumidifiers required to process the air once, twice or three times an hour. If the environment requires additional air exchanges, more dehumidifiers can be added.

Wrap Up

We can estimate, with a great degree of accuracy, the amount of equipment needed to begin water loss remediation. Once started, the process must be monitored using moisture detection meters. As atmospheric conditions change and materials dry out, monitoring points out when additional drying equipment may be needed or when equipment can be removed. Finally, monitoring tells the service provider and insurance professional when remediation has been completed.

STATE OF CALIFORNIA STATES TRUST IN SERVICEMASTER



The State of California has awarded a Master Service Agreement to ServiceMaster to provide disaster recovery services to over 1,900 state government facilities.

This agreement - an unprecedented contract for the state - means that the covered facilities will not have to go through the usual government approval process in the event of a disaster. ServiceMaster is pre-qualified to provide the disaster recovery services, and can respond immediately when there is a need.

The State of California chose ServiceMaster over seven other national disaster restoration companies, largely because of the company's local, regional, and national response capabilities.

"In a major disaster situation, local and regional resources are often quickly exhausted," says Steve Losorwith, ServiceMaster National

Property Loss Recovery Manager. "The fact that we have a contract with the State of California, and that we are pre-approved to provide restoration services to their government entities, gives ServiceMaster a phenomenal opportunity to respond to those state agencies in a time of need.

"In the restoration industry, trust is very important," Losorwith continues. "The fact that we have a pre-negotiated contract that requires nothing but response from us in the wake of a disaster is the best of all worlds for all people. A contract should never be negotiated in a time of need. The State of California was very proactive and prudent to make this contractual arrangement on the front end, and they should get a lot of credit for their foresight."

Because of this foresight, ServiceMaster will be able to respond quickly to return vital government resources to a pre-loss condition should the need arise.

When **Tornadoes** Swing Through Minnesota, **ServiceMaster Swings Into Action!**

When tornadoes cut a long swath through Minnesota in the early evening hours of Sunday, March 29, phone and power lines were down and most people in nearby communities didn't realize how severe the damage was until the next day.



But on Monday morning, the devastating destruction was apparent and heart wrenching. Two lives were lost. One entire town - Comfrey - was literally destroyed, leaving thousands of displaced families. In St. Peter, about 70 miles from Rochester, 2,000 homes were either demolished or damaged.

When ServiceMaster Market Manager Ron DenOuden got to his office in Rochester and was unable to contact St. Peter ServiceMaster owners Devon and Sheryl Esau, he knew exactly what to do. DenOuden immediately activated his Catastrophic Response Network by sending out communications via e-mail and fax to all the franchises in his market. DenOuden asked franchise owners in his area to respond immediately with the amount of manpower and equipment they could mobilize to St. Peter quickly.



The franchise owners immediately supplied DenOuden with the information he needed, and the wheels of the ServiceMaster disaster recovery network were set into motion.

Meanwhile, ServiceMaster Recovery Management was already en

route from its Memphis headquarters to start recovery work for St. Paul Insurance at St. Peter Community Hospital, the Wellness Center, and Gustavus Adolphus University.

DenOuden and Brad Key, ServiceMaster Recovery Management National Operations Manager, spent two days walking the facilities together to determine the scope of the work. Key and DenOuden quickly decided that the best way to coordinate their efforts was for ServiceMaster Recovery Management to tackle the university and commercial buildings, and the local franchise crews to do the residential work.



"Our ServiceMaster crews were the only disaster recovery people in town for the first week and a half," DenOuden remembers.

In just two-and-a-half weeks, DenOuden's crews performed disaster recovery services on well over 100 homes. "We were able to respond with crews and equipment from about a dozen local franchises," DenOuden says. "The Esaus manned the telephones and we distributed the work as the crews came in from each job."

On the commercial side, ServiceMaster Recovery Management performed disaster recovery services for the hospital, the wellness center, the nine of the college buildings, including several large dormitory structures.

The cooperative efforts of the franchises and of ServiceMaster home office was no accident, DenOuden says. "Having the system in place beforehand enabled us to respond quickly, efficiently, and effectively," he says.

"Even if a loss may initially appear too large for a single local franchise to handle, it's important to remember that ServiceMaster has the network, resources, equipment, contacts, expertise, and people power to handle losses of any size and scope. We have the systems in place to mobilize our crews and equipment and to get the job done."



Building Relationships **Before** Disaster Strikes Can Save Time, Money and Frustration **After**

Knowing who you are working with and what to expect is always good business and always reassuring, but never more so than in the wake of a disaster.

Bob Heykoop, owner of ServiceMaster Central/Cherry Creek in



Englewood, Colorado, has always built strong relationships with the adjusters he serves, and recently his efforts paved the way for a particularly smooth disaster recovery effort under his supervision. When a fire devastated

the LK Printing company in Englewood, valuable presses and expensive equipment were destroyed, and crews of the company's workers were suddenly left idle. A space heater malfunction had caused the fire, leaving the 10,000 square-foot facility a total loss

with \$3.5 million in damages.

Heykoop had built a good relationship with the insurance company, The Hartford, on a local basis before the fire, so when The Hartford brought a national general adjuster in to handle the loss, Heykoop was already familiar with the company and with the people.

"We were on site within two hours from receiving the initial call," Heykoop says. "And we were able to restore the salvageable contents in less than 20 days and have LK Printing up and running at a new location shortly thereafter. We also came in below the not-to-exceed price.

"The adjuster was very professional and proactive in his approach to the loss," Heykoop continues. "On our end, the key to our success was immediate response and a willingness to help and do whatever it took to get the business up and running again as quickly as possible. We really tried to do anything possible to help Hartford, including providing office space for their out-of-town adjuster and specialists. We were also able to provide a great deal of valuable information to them on a local level, and to help them get around town."

Heykoop also says that there is no doubt that his prior relationship with Hartford helped things move along efficiently. "Because of our relationship with Hartford locally, when a national adjuster came in it was a smooth transition for everyone."

Be looking in future issues for information on pre-disaster priorities.

Compliments of your local ServiceMaster

ServiceMASTER
Clean

*The clean you expect.
The service you deserve.*