



## Restorative drying: Successful Extraction

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### Feature

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A successful water damage restoration project starts with thorough extraction. Extended drying times, unnecessary equipment rental charges, additional damage to contents and structure and the potential for mold and mildew damage are the results of poorly executed extraction procedures. Let's examine the history and evolutions of extraction the equipment. We can then consider some options to increase the efficiency of our extraction procedures.

As the water damage restoration industry developed in the early 1970s, it was only natural that the use of vacuum in some form be used for the removal of water. The first extraction of water from carpet used commercial tank or wet/dry vacuums coupled with standard floor tools, light wands or crude weighted drag wands.

Some of the more fortunate contractors used their "steam" carpet cleaning machines to extract the water. It was common sense to suck out as much water from the carpet as possible. Our clients and the insurance adjuster thought that just vacuuming out the water would dry the carpet. They did not understand why the carpet wouldn't dry completely; many early restorers didn't understand either.

Today we know that any successful water damage restoration project starts with a thorough extraction. Over the years, extraction equipment and related technology have significantly increased the efficiency of extraction procedures. The following will compare types of extraction equipment and methods, address the importance of customer satisfaction and offer simple suggestions to increase extraction performance.

### **In the beginning . We didn't have a clue either.**

#### **Extraction Equipment**

First came Vacuum equipment. What we use today evolved from the wet/dry vacuum, is much like the tank vacuum ones in you might find in your shop. From this came portable carpet extractors, and then truckmounted units. There are various arguments about the merits of centrifugal bypass vacuums (those used on most portable extractors) and the positive displacement vacuums used on truckmounted units. Those arguments pit airflow (cubic feet per minute) against vacuum pressure (measured in inches of water lift or inches of mercury).

Common sense, however, tells us that a combination of both is necessary for successful extraction. In our industry portable extractors need at least 140-feet of water lift to be considered effective in water damage situations. A disadvantage in using a portable cleaning extractor is the limited recovery tank capacity. The burden of constantly emptying buckets makes the use of portables frustrating.

This is not as much of a problem with truckmount units using larger recovery tanks. The pump out systems available as options on both portable and truckmount units are usually ineffective in water damage situations. These systems were designed for carpet cleaning applications with the volume ranges from 1 to 1 and a-half gallons per minute, far too low in water damage situations where extraction volumes reach 30 to 50 gallons per minute or more. Higher volume pump out systems currently being developed for truckmounted units should accommodate water damage applications.

Another extraction machine used for water damage is the flood pumper, a portable extractor with a high volume pump out system. It is an excellent cost-effective tool for removing standing water. Discharging water as fast as it can be picked up, it works well removing water from carpet and cushion when used with the appropriate floor tool. The only disadvantage I can see is it the machine must be carried into the home.

## Extraction Tools

It is obvious that a better, more efficient and thorough extraction is necessary if we are to reduce drying times. We have all tried everything possible. Many of us have experimented with various "pioneering" techniques to improve the effectiveness of our water extraction systems. Years ago I had my little brother (6-feet, 2-inches, 220-plus pounds) stand on a wand hooked to an industrial type wet/dry vacuum as I pulled him across the carpet. Crude but more effective than the standard lightweight wand.

Improvements in extraction tools led to the use of better, weighted drag tools that could double as water extraction tools.

## Roller Vac

In the early 1980s a stainless steel version of a linoleum roller was introduced to squeeze the water in the carpet cushion to the surface of the carpet. It was also used to push water to the edges or corners of the carpet to be picked up by a vacuum tool. This evolution of extraction tools led to the invention of a tool incorporating a stainless steel roller, weighted drag tool and weight box: The first true water damage-only extraction tool used by restorers. The roller vac could not be used to clean carpet, only to extract water from the carpet and cushion.

## Rotary Extractors

The latest extraction tool is a refinement of the roller vac tool. This new tool Hydro Xstream Extraction incorporates system that uses a weighted, power driven roller with an extraction head. This tool is the most an effective tool for removing water from carpet and cushion, which in turn can speed the drying process. The drying flexibility this tool allows gives giving professionals more many choices in drying techniques.

The Hydro Xstream can be used when cushion removal is not necessary, making the job neater. Technicians don't do not have to put up with the mess of sloppy wet pad, wet pants and heavy garbage bags full of wet water-soaked cushion. If When used before conventional drying - where the cushion is left in place and air movers are installed between the carpet and cushion - the drying process is accelerated.

## Surface Drying

The now-popular 'top drying' system can be employed when carpet and cushion are nearly dry after extraction.

### Top drying

Top drying eliminates the need to remove carpet cushion, saves labor costs, and eliminates the need to replace carpet cushion and reinstall the carpet. It also reduces the need to remove furniture from damaged areas. Top drying should only be attempted when a properly equipped contractor has the right training and understanding of the drying system's limitations.

## Some tips of the trade

Tools are the easy part of our business. Pleasing customers and adjusters can be challenging, and their satisfaction is vital to our success.

To be effective, you need a verifiable system in place to insure that your technicians have done a thorough extraction.

Pockets of wet areas, missed or poorly extracted carpet can extend drying times. As an industry, we already have enough criticism from property owners and insurance companies about our equipment rental charges. We can ill afford to cover a poor extraction job with extended equipment rentals.

Here are some simple suggestions to increase your performance with extraction: Keep vacuum filters and vacuum equipment clean.

Dirty fan blades on portable equipment reduces vacuum efficiency. Leaky, kinked or collapsed vacuum hoses and poorly maintained recovery tank seals can lead to poor extraction. Lose the duct tape. Replace damaged and worn hoses. Inspect your equipment and technicians performance regularly. Set minimum standards for your technicians to follow. Design systems that are fool proof, list the steps necessary for your production staff to follow and only allow deviation

in specifically listed situations.

Consider adjusting your extraction rates for the time and equipment you use when employing advanced extraction techniques. You and your technician will be motivated to spend the added time necessary to complete the extraction properly. The added benefit of a through extraction reduces drying times and in the end saves the owner and insurance company. This real value justifies additional charges.

The most efficient water removal is done in the liquid state. Using airmovers and dehumidifiers are only efficient when the bulk of the water has been removed by a complete and thorough extraction.

The bottom line, whatever extraction and drying system you use, is it should be simple, effective and save money for the homeowner when compared to replacement cost.

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