New Technology Streamlines Water Damage Restoration

The couple slept unsuspectingly as the fierce storm raged outside. The last thing they expected was the sound of water droplets falling softly from the ceiling, gently tapping their pillows.

Soon it became a cascading stream and the ceiling fan that had kept them comfortable that evening was quickly being transformed into something resembling an indoor lawn sprinkler.

Having a section of roof ripped away in the middle of the night can be a terrifying experience but not an uncommon sight for the employees of Westlake-based, Restorz, a NOAA Associate Member. As Senior Project Manager George Dzuro explained, "The key is responsiveness. As a first responder, you have to mobilize quickly with personnel that are accustomed to encountering adverse situations. Mitigation of secondary damage is a priority, particularly with water damage." "Not only do you have to be concerned about providing temporary repairs expeditiously," he said, "you have to also be concerned about water migration."

Restorz provides a complete "moisture map" of a water damaged structure. Sophisticated tools such as non-invasive moisture meters, thermal imaging cameras, and forensic boroscopes are utilized to gain an understanding of apparent, as well as concealed, areas of moisture within a structure.

This information is then used to determine a comprehensive drying plan and the resources necessary to return the indoor environment to normal conditions. This is accomplished through a scientific process known as "Psychrometry". The trained professional understands the relationship between humidity, airflow, and temperature. Through detailed analysis and monitoring of conditions, data is collected and used to determine if a structure is drying sufficiently. This information is recorded providing documentation that a structure has been thoroughly dried.

"Monitoring of conditions also serves to justify cost," said Dzuro. "We can determine the appropriate amount of equipment needed and reduce the amount of resources, as necessary. Also, by utilizing a correct application of engineering controls, such as a 'micro-environment', we can help to reduce costs by establishing a more efficient drying process."

"Experience in the construction industry also helps provide a common sense approach to drying a structure" according to Dzuro. "If we know that a structure has been constructed with metal studs as opposed to wood, we have to be aware that water can collect in channels at the base of the frame. If not addressed, it can lead to a mold situation. This is just one example. There are many unique construction methods and materials that can present problematic drying challenges."

Construction experience can also provide for a more cost-effective drying process. According to company President Don Nigro, "having personnel with construction expertise allows us to make prudent decisions if circumstances dictate that a more invasive mitigation approach is required. With a solid understanding of the building sciences, we remove building materials with an understanding of how they will eventually have to be replaced. It helps to avoid unnecessary material

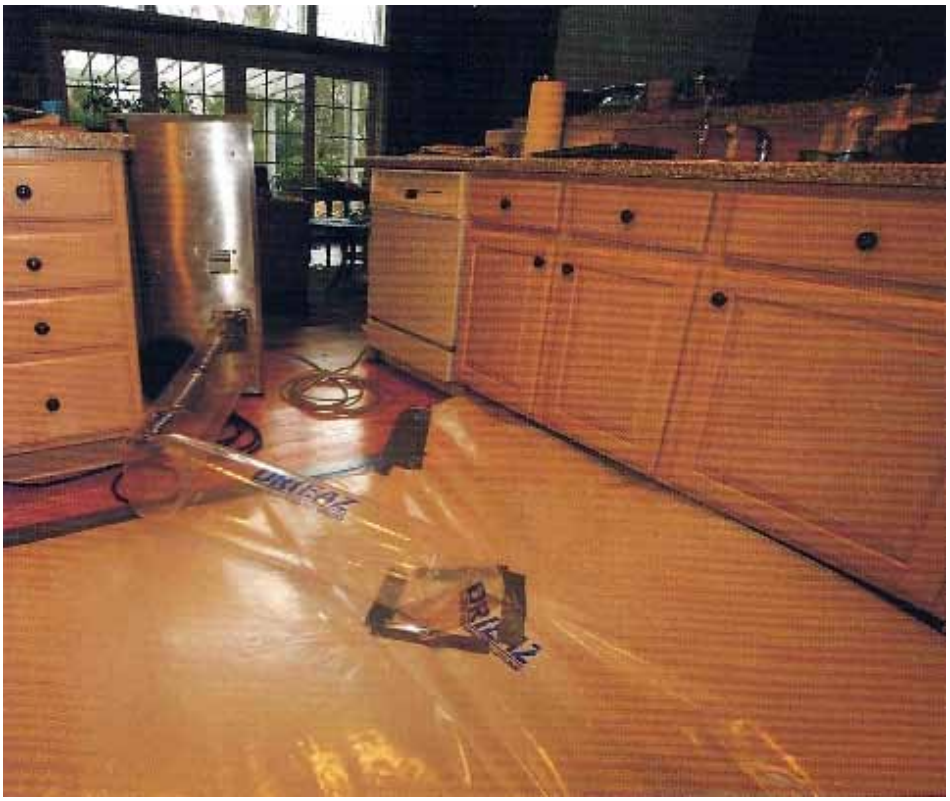
Water damage that may not be visible to the eye (left) can't from an infrared camera (right), which easily identifies migration patterns.

replacement costs."

Not only can water penetrate through a roof, it can also find its way into the indoor environment from below, via the sewer systems. According to Dzuro, "a sewer back-up presents a whole different challenge. We have to be concerned about contamination and the effect on occupants, workers, pets, personal contents, etc."

Concern also needs to be given to any contaminated building materials and their ability to be salvaged. Standards have been set by a trade organization called the Institute of Inspection, Cleaning, and Restoration certification (IICRC). these guidelines have been established to ensure that the health and safety of building occupants are not compromised.

"Water is categorized by level of contamination and classified by extent of migration. The trained professional should have an understanding of the permeability of various types building materials and how it relates to the categories" explained Nigro.



"One of the tools we utilize is a Bio-Reveal microbial evaluation device. It provides an instantaneous, on site reading of bacteria levels and mold levels so first responders can make prudent decisions concerning, the health and safety of workers and occupants as well as material salvagability" said Dzuro.

The goal of water damage control is not only to mitigate structural damage; it is also to ensure the prevention of mold.

"The first step to preventing mold is to ensure that a structure is completely dry" said Nigro. "Typically, mold begins to grow in the inconspicuous areas. Our challenge is to identify these often overlooked areas, and effectively dry them before they become problematic."

Water damage mitigation is more than simple placement of a dehumidifier. It requires responsiveness, competent project management, trained personnel with proper resources, and documented results to ensure a process that is thorough and cost effective. For a professional drying contractor, these components are common practice.