

Effective tools for water damage remediation

BY ART JOHNSON

In this edition of *Ops Talk* I would like to cover some of the tools that help us effectively address a water-damaged area which has suffered a flood. Depending on the severity of the flood and the level of contamination of the water, it may call for some variations in the approach but in general, the procedures follow the same path.

As with any type of flood, once the source of water has been stopped – whether that be from a river or a hot water tank – the area must be determined to be safe from electrical and other safety hazards. Many times when major events happen, electricity is not available; we may therefore find areas with insufficient lighting, resulting in an increased risk of bumping into things, falling down stairs, or in one situation, walking right into an area where a fire had burnt a 12' hole in the floor, thus exposing the hazardous risk of falling ten feet to the floor below.

Electrical hazards are another common risk after a flood, so the situation calls for a diligent risk assessment to be conducted in order to determine if the area around the flood is safe. If water cascaded down the walls or took part of the ceiling out, is the water on the floor safe to step into without using a voltage and current detector first? Are there any wires hanging if you are in a crawlspace?



Once the risk assessment determines that your technicians can proceed safely, then it is time to use the tools designed for finding the water damage. Moisture detection tools may include pin-type probes, for use on carpets and padding, that beep when they detect moisture; non-destructive meters with a progressive LED scale can be placed on a wall surface to determine if above-average levels of moisture exist in the drywall; or probe-type meters that allow for investigation into wall cavities, so that pockets of moisture are not left behind allowing mould to grow.

Beyond these common instruments, we go into the more technical tools that may include digital cameras to see inside of areas where a person's head will not fit, such as ceiling or floor cavities or plumbing stacks. These cameras are complimented by inexpensive fiber optic scopes that will fit into a 3/8 inch hole, allowing one to see into these tight areas also.

Thermal imaging cameras are a very common tool used by restoration contractors today; when used properly, the cameras allow the user to do a very quick but thorough assessment to determine all the areas that are wet on the inside of the rooms. Before these became available, one would have to go around the room and investigate almost every square inch to ensure that all water which may have migrated from the original source was detected; but now, one glance through the lens of the camera reveals the areas of concern very quickly.

As the drying process is carried out, thermal hygrometers verify effective use of the drying equipment, and help to determine how much water is still in the structure after the obvious moisture is removed.



POMEROY

CONSULTING ENGINEERS

BUILDING THE FOUNDATION FOR EDUCATION

Educational Facility Specialists

- complete structural design services
- feasibility studies
- renovation design
- new building design
- seismic evaluation and upgrade design



**Structural Engineers Serving School Districts
Throughout British Columbia**

308 - 4211 Kingsway
Burnaby, BC V5H 1Z6
info@pomeroy.ca

Ph: 604.294.5800
Fax: 604.294.0400
www.pomeroy.ca

Member of the GENIVAR Group of Companies



The amount of dehumidification has, at times, been questioned by some due to the fact that no measurement is in place to ascertain if we need more dehumidifying or less respective to the size of the flood we are addressing; and also, can it be justified. I can't tell you the number of times I have seen a dehumidifier set up in an area that it has had no effect upon, due to the size of the area or the size of the dehumidifier used, or times the dehumidifier was oversized for the area it was intended to dry.

By using thermal hygrometers, we measure the specific humidity in the room to determine the size of the dehumidifier needed, after this is established, we can measure the specific humidity going into the dehumidifier and what is exhausting out the processed port, thereby ensuring that dehumidification is effective, and when the equipment can be removed.

When a dehumidifier is in use, there should be a reduction

of at least 20 grains per pound of specific humidity; it should pull less moisture out of the air as the structure dries out. If the area is so moisture-laden that a dehumidifier cannot keep up with the rate of evaporation, either more dehumidifiers need to be added or the number of fans need to be reduced so that less evaporation is done. Adding more dehumidifiers is preferred, so that the building can be dried as quickly as possible.

This is a small sample of some of the tools a restoration contractor will use to ensure the water damage remediation is performed in accordance with the recognized industry standard. Some school districts have people specifically trained to handle their floods in-house while others call in restoration contractors, but either way, it is imperative that the situation is being handled utilizing the right tools, ensuring that the building is safe for occupants, and safe from losing its structural integrity in the future. □

Is Your School District Going
'GREEN?'

**PRO-PAC WBU-450
Water-Bourne Urethane**

is the product you need to
meet **'GREEN'** requirements!

**PROGRESSIVE
SERVICES LTD**

COQUITLAM, B.C.
(604) 525-1685 or 1-888-922-8845
Fax No: (604) 525-6693
E-mail: progressiveservices@telus.net

Spears
"The Pump Service Centre"
Quality Service Since 1960

SALES & SERVICES LTD.
COMMERCIAL • INDUSTRIAL • RESIDENTIAL

SPEARS
SALES
SERVICE

BOILERS • MOTORS • CONTROLS
PUMPS – SUBMERSIBLE / HVAC / FIRE /
WELL / BOOSTER

- SALES
- INSTALLATION
- SERVICE
- CONSULTATION
- MAINTENANCE
- TECHNICAL DESIGN

HydroTherm
CORPORATION

AURORA/HYDROMATIC Pumps, Inc.

BARNES PUMPS, INC.

9,000 Sq. Ft. Parts, Repair, and Warranty Service Facility
24-Hour Fully Equipped Mobile Service Fleet

(604) 872-7104 Local 131

Toll Free: 1-800-663-6169 • Fax: (604) 872-7102
3586 Commercial St., Vancouver, BC V5N 4E9

Phone: (604) 513-2445 • Fax: (604) 513-2446
Unit #11, 19725 Telegraph Trail, Port Kells/Langley, BC

Monday-Friday 7:30-5:00 www.spearsales.com