



Research & Development Highlights

92-200 Technu-1 Series

Investigating, Diagnosing and Treating Your Damp Basement

Introduction

Basements have increasingly become part of the living space in Canadian houses. Basements are plagued with moisture problems, particularly as they get older. Dampness and moisture problems are responsible for musty basement air; mildew on stored items; humidity problems; and structural, wall, floor and furniture decay.

The causes of basement moisture problems are numerous. It is often confusing and costly to try to remediate the situation before isolating the exact cause. The Research Division of CMHC has gathered the best advice on basement moisture problems in an easy-to-read guide for householders. It will help diagnose moisture problems and identify their sources. Interim and long-term solutions to each problem type are included.

Description of the Publication

The guide can be used in several ways. If a householder is considering a renovation or feels that the basement is a problem area in the house, the booklet will provide a general discussion of moisture in housing and direct the reader to further investigations. However, if the householder has a specific problem - for instance, water running across the floor - the guide can show particular causes and offer appropriate solutions.

The guide is broken down into a number of easy-to-use sections. The SYMPTOMS section describes the main symptoms likely to be found in a house with a damp basement and lists probable sources and causes. The SOURCES AND CAUSES section lists a series of tests to confirm the source or cause, and offers some solutions (see Fig. 1). A SOLUTIONS section gives an indication of the price range for solutions in terms of low, medium or high.

The guide will enable householders to diagnose their own basement problems in an objective fashion. If contractors are recommending work to be done, the guide will allow householders to judge whether the work is, in fact, necessary or whether a less expensive solution might suffice. The guide can often provide sufficient information to allow householders to make their own repairs.

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Research Report: Investigating, Diagnosing and Treating
Your Damp Basement (1992) NHA 6541
Research Consultant: 181 Group*

*A full report on this research project is available from the
Canadian Housing Information Centre at the address below.*

Housing Research at CMHC

*Under Part IX of the National Housing Act, the
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conduct research into the social, economic and
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*This factsheet is one of a series intended to inform
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Cette publication est aussi disponible en français.

Figure. 1 Excerpt from SOURCE AND CAUSE Section

11. HUMID OUTSIDE AIR USED FOR SUMMERTIME VENTILATION

DESCRIPTION

The dewpoint temperature of outside summer air used to ventilate the basement can be above the basement wall/floor surface temperature. This results in *condensation* inside the basement on the cooler basement walls, floors and other surfaces. (See Figure 25.)

CHECK/TEST

Are windows open during summer and hot and humid spring/fall periods?

Check for *condensation* on walls, floors, ducts, pipes and other surfaces.

Are basement carpets damp?

In spring, check to see if *condensation* covers the entire wall, from top to bottom. This can indicate *condensation from* humid outside air and not from leakage.

POSSIBLE SOLUTIONS

- B. Add dehumidifier (AND KEEP THE WINDOWS CLOSED).
- F. Retrofit and insulate exterior basement walls.
- G. Retrofit and insulate interior basement wall and retrofit *air/vapour retarder*.

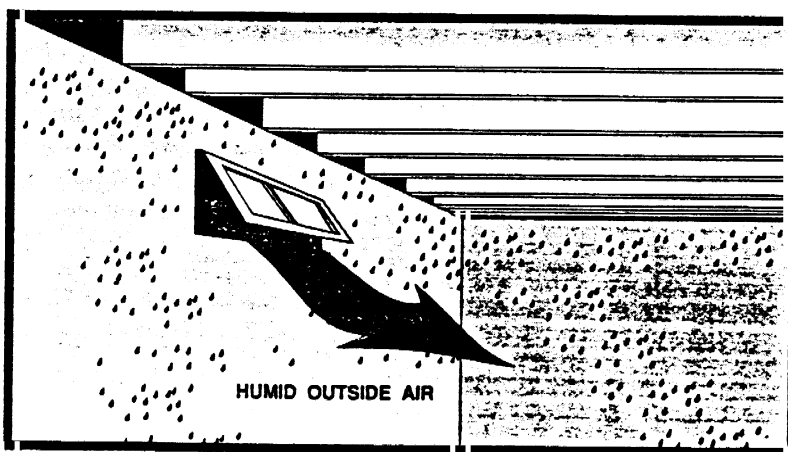


FIGURE 25

CONDENSATION DUE TO HUMID OUTSIDE AIR
USED FOR VENTILATION DURING SPRING/
SUMMER/FALL

[SOURCE CASE 11 J