

# BASEMENT LEAKS/MOISTURE

All areas below the grade line are susceptible to water at one time or another. A house with water problem does not necessarily mean it was poorly constructed. It's a fact of home construction.

The most common cause of basement water problems is inadequate surface grading and drainage. In general, over **90% of basement water problems are the result of neglected gutters and downspouts or improper grading**. A very small percentage of basement moisture problems are the result of high water table. *Basement moisture problems are not always obvious. Moldy or musty odors are not always present during the time of inspection, and signs of moisture may be hidden by interior finishes.*

## **SIGNS OF BASEMENT LEAKS/MOISTURE:**

- FOUNDATION WALLS THAT ARE CRACKED OR BULGING
- EFFLORESCENCE (A WHITE POWDER MINERAL DEPOSIT) ON MASONRY OR CONCRETE WALLS
- STAINS, DISCOLORATION OR DECAY ON WINDOW SILLS, SILL PLATES, WOOD POSTS, FURNITURE OR CARDBOARD BOXES
- BULGING OR LIFTING DRYWALL TAPE, POPPED NAILS, BUBBLING OR PEELING PAINT AND DETACHING WALLPAPER
- RUST AT THE BASE OF HEATING EQUIPMENT, STEEL POSTS OR APPLIANCES
- LIFTED FLOOR TILES, BUCKLED PANELING, MILDEW ON CARPET

**Direct one-time leaks** occur infrequently and are due to specific conditions. Leaks may be the result of wind-driven rain into cracks or an abnormal early spring when melting snow cannot penetrate the frozen soil and instead finds its way down the side of the foundation where the soil is permeable due to heat loss.

**Seepage** may occur on a regular basis, but at a slower rate than direct leakage. This is noticeable in the fall or spring when heavy rainfall and melting snow cause the soil around the foundation to become saturated with water. The weeping tiles may not be able to carry the excess water away, subsequently, it seeps into the basement. Note that weeping tiles (or footing drains) were not commonly installed for homes built before 1950. Many are no longer effective due to deterioration, clogging or poor design, for houses that are 20 years or older.

**Condensation** is a significant source of basement moisture. When the basement air is humid, the moisture in the air condenses on cool surfaces such as cold water pipes, foundation walls or floor slab.

## **SOURCES OF BASEMENT LEAKS / MOISTURE:**

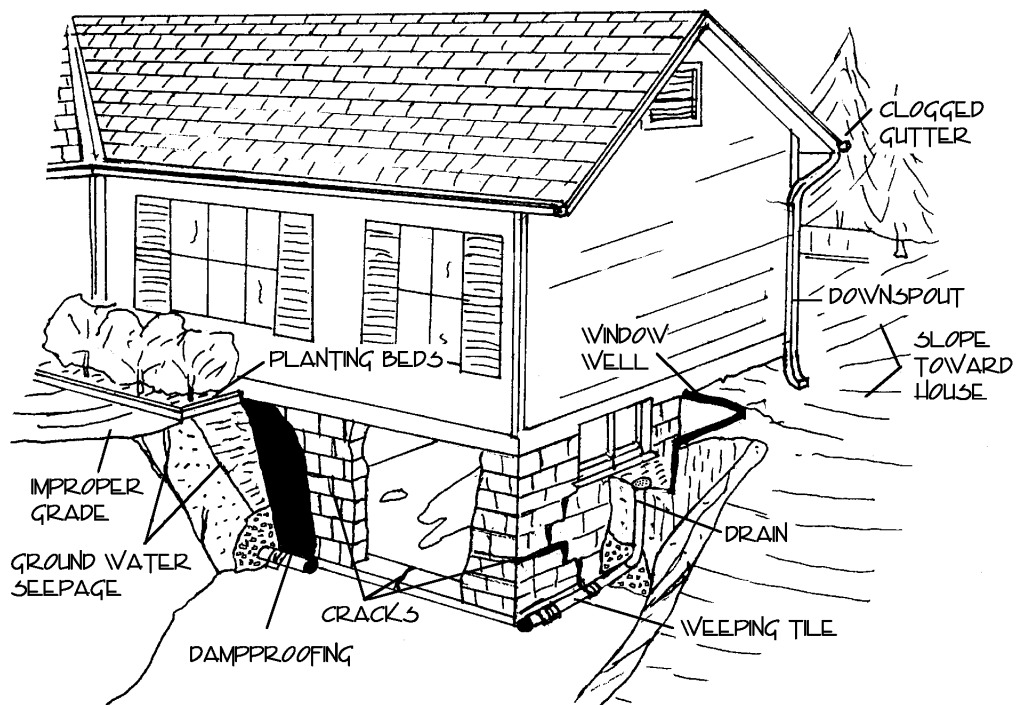
- IMPROPER GRADE (INCLUDING DRIVEWAYS AND WALKWAYS)
- CLOGGED/OVERFLOWING GUTTERS AND DOWNSPOUTS FLOW TOO CLOSE TO FOUNDATION
- GROUND WATER SEEPAGE THROUGH WALL AND FLOOR CRACKS
- PLANTING BEDS ADJACENT TO THE HOUSE (THE SOIL TENDS TO HOLD A SIGNIFICANT AMOUNT OF WATER)
- CLOGGED/DAMAGED WEEPING TILES (INCLUDING POORLY DRAINED WINDOW WELLS)
- RAIN PENETRATION IN SMALL CRACKS (FOR EXAMPLE, BETWEEN BRICK VENEER AND FOUNDATION WALL)

## **METHODS TO REDUCE CONDENSATION:**

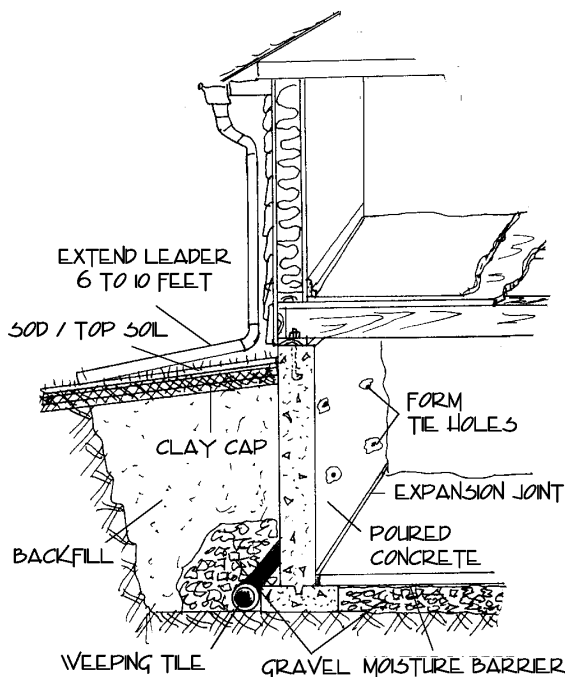
- IMPROVE VENTILATION BY OPENING BASEMENT WINDOWS OR INSTALLING AN EXHAUST FAN
- RAISE THE TEMPERATURE IN THE BASEMENT
- VENT MOIST AIR TO THE EXTERIOR (SUCH AS FROM A CLOTHES DRYER OR BATHROOM)
- INSTALL A DEHUMIDIFIER
- INSULATE COLD WATER PIPES AND BASEMENT WALLS
- PLACE A MOISTURE BARRIER OVER THE DIRT FLOOR IN CRAWLSPACES

For further information contact your local building authorities or a licensed basement contractor.

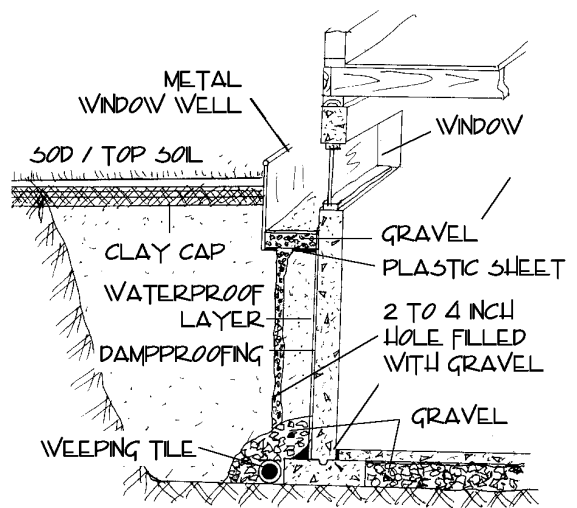
# BASEMENT LEAKS/MOISTURE



COMMON CAUSES OF A WET/MOIST BASEMENT



PROPER EXTENDED LEADER AND GRADE



PROPER WINDOW WELL DRAINAGE