

Excel Custom Decks Releases Guidance on Dry Soil and Deck Footings

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FRANKSVILLE, WI - September 02, 2026 -

Excel Custom Decks has released homeowner guidance on how prolonged dry weather affects the ground supporting residential deck footings, following a summer in which drought conditions expanded across much of Wisconsin. The U.S. Drought Monitor classified approximately 16 percent of the state as being in active drought as of July 21, 2026, with an additional 47 percent rated abnormally dry.

Satellite modeling published through Drought.gov by NASA's Short-term Prediction Research and Transition Center placed much of the top meter of Wisconsin soil between the 10th and 30th percentile for moisture in late June, with pockets along the Lake Michigan shoreline falling below the 5th percentile. The University of Wisconsin-Madison Division of Extension reported comparable patterns in its weekly crop and soil outlooks through July, and the National Weather Service Climate Prediction Center outlook for the second half of July leaned toward above normal temperatures and below normal precipitation statewide.

Deck footings transfer structural load into the ground, which makes the behavior of that ground part of the support system rather than a background condition. Clay soils, common across southeastern Wisconsin as a result of glacial deposition, contract as water leaves them and expand as it returns. The U.S. Department of Agriculture Natural Resources Conservation Service documents this shrink and swell behavior by soil series through its Web Soil Survey, and the degree of movement recorded there varies considerably from one parcel to the next, sometimes within the same subdivision.

"Frost gets the attention in this state because the movement shows up all at once in spring," said Rob McDonald, Owner and President of Excel Custom Decks. "The dry half of that cycle works slower and it is easier to miss. A footing sitting in clay that has been drying since May is not sitting in the same material it was placed into."

Changes occurring below ground are not always visible from the walking surface of a finished deck.

Indications more often appear at the perimeter of a structure, at the point where a deck attaches to the house, or as gradual separation between framing members and hardware. Soil pulling away from a post base, a stair landing that no longer sits flush, or a gate or railing section that has shifted out of alignment can all reflect conditions underneath rather than problems with the visible components themselves.

The age of a structure influences how those conditions present. A deck built two decades ago has moved through many wet and dry cycles and has generally found whatever equilibrium the site allows. A structure built during the current season is being placed into ground that is drier than normal for the date, which is a consideration during excavation and placement rather than something addressed afterward.

Footing depth and footing type are among the details that determine how a structure responds to seasonal ground movement. The American Wood Council publishes prescriptive guidance for residential wood deck construction that addresses footing sizing, placement and load paths, and that guidance is widely referenced by builders and building officials across the Upper Midwest. Where soil conditions fall outside prescriptive assumptions, engineered designs are used instead.

Framing forms the remainder of the structural system that works together with the footings. Material selection varies by project, with pressure treated lumber and steel among the options used in residential deck construction. While ground conditions act primarily on the footings, an assessment of an existing structure considers the framing, the fasteners, the connection to the house and the site conditions as one system rather than as separate items.

"Site conditions decide the foundation, not the other way around," McDonald said. "The same deck drawn for two properties a mile apart can call for different footings once the ground underneath is understood. That work happens before anything gets built, and it is not visible in the finished project."

Dry weather represents one factor among several that act on the ground surrounding an outdoor structure. Heavy rainfall, altered drainage patterns following landscaping or roofing work, freeze and thaw cycling through a Wisconsin winter slope, and the presence of mature tree roots all influence how a site behaves over time. Properties that have recently lost large trees, a common circumstance across the region following emerald ash borer infestation, can experience changes in both shade and subsurface moisture uptake.

Soil conditions are also a consideration during the planning stage of a new project. Design decisions regarding footing type, deck height, stair placement and framing layout are shaped by what exists at the site, and addressing those conditions before construction begins is generally more practical than adjusting for them later.

Excel Custom Decks is a family owned deck builder founded in 2000 that designs and builds residential

decks and outdoor living structures in Wisconsin. The company works with wood, composite and PVC decking and provides design consultation, framing, railing, lighting and deck inspection services.

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Excel Custom Decks is a family-owned deck builder based in Franksville, Wisconsin, serving Racine County homeowners since 2000. Owner Robert McDonald is a Deckorators Certified Pro Elite, and the company is a NADRA member firm with BBB accreditation.

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