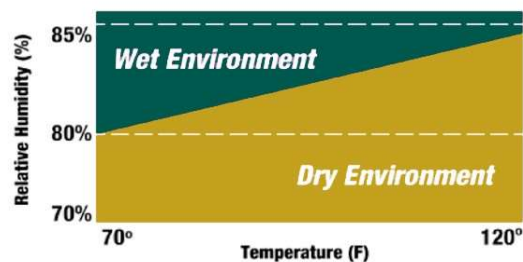


Subject: Technical Talk – What are wet use conditions?

It's not as easy as saying all exterior applications are wet use conditions and all interior applications are dry use conditions. Ambient temperature and relative humidity play a role.

The NDS defines dry service (Dry-Use) for structural composite lumber products as an in-service moisture content of less than 16%. For a wood product to reach an Equilibrium Moisture Content (EMC) above 16% for a prolonged period very high relative humidity levels need to occur. Based on climactic data (see links below) there are very few areas across the country where the EMC ever reaches above 16%, and when it does it is not for a prolonged duration as a dry cycle naturally occurs shortly thereafter (colder temperatures, lower relative humidity).



However, high moisture content and the resulting degradation can be observed in situations or scenarios where water collects and doesn't readily evaporate, such as improperly detailed column bases and connections in saddles where water accumulates.

Pacific Woodtech provides prescriptive engineering tables, wet use design values, and a wet use toggle in the CSD software for products allowed in wet use conditions.

If there is any question regarding use condition, a licensed design professional should be consulted to determine if wet use design adjustments apply.

#### Climactic Data Links

- Equilibrium Moisture Content of Wood in Outdoor Locations in the United States and Worldwide (<https://www.fs.usda.gov/treearch/pubs/5913>)
- The Equilibrium Moisture Content of Wood in Exterior Locations in the United States: An Update (<https://research.cnr.ncsu.edu/blogs/wpe/2016/12/23/the-equilibrium-moisture-content-of-wood-in-exterior-locations-in-the-united-states-an-update/>)