

# USFS Transportation Structures Timber Treatment Guidelines

## Trail Structures

06/24/2022

### Substructure/Piling/Retaining Walls/Cribbing – AWPAC UC4C

- Copper Naphthenate in hydrocarbon solvent A
- CCA
- Alternate oil-based products when approved equal

### Superstructure/Decks – AWPAC UC4C

- Copper Naphthenate in hydrocarbon solvent A
- Alternate oil-based products when approved equal

### Timber Wearing Surface

- If mechanical life < 10yrs, treatment not required (allows simplified disposal).
- If mechanical Life > 10yrs, treatment is required (increases the in-place lifecycle)
- If treated – AWPAC UC4A, Either oil-based or waterborne treatment options as below

### Railing Posts/Rail Boards – AWPAC UC4A. Rail posts can be oil-based or waterborne.

- Copper Naphthenate in hydrocarbon solvent A
- If Needed<sup>3,4</sup> ; Waterborne treatment where allowed, such as:
- Alkaline Copper Quat (formulation A, B, C, or D), Copper Azole (formulation B or C), or Micronized copper azole (formulation C)
- Alternate oil-based or waterborne products when approved equal

### Hardware

Avoid use of lag bolts, use thru bolts where practical and at all connections subject to movement and vibration  
Hardware through or into oil-base treatment shall be hot-dipped galvanized per ASTM A123.

Hardware through or into waterborne treatment shall be stainless or hot dip galvanized, per ASTM F593 or ASTM A123; with wood screws and construction lags meeting ICC AC 257.

### COMMENTARY

1. Projects in contact with marine or brackish water shall refer to Use Category 5 in AWPAC book of standards.
2. All processing and use of treated timber shall follow WWPI BMP Guidance. Noted treatment-levels are minimum and may furnish higher rating if approved.
3. Priority for treatment selection shall be for highest practical treatment level to protect the structure; in cases where significant high-use pedestrian contact, Rail-boards may be waterborne-treated to no less than AWPAC UC4A.
4. In cases with high-use pedestrian contact and smell sensitivity projects using oil-based preservatives; Industrial Absorbent may be applied during construction as after-coat to alleviate smells. (e.g., Ecosorb or approved equal)
5. Field-treat all cuts, bores, holes and other alterations performed after pressure treating with 3- brush coats of Copper Naphthenate, or AWPAC M4.
6. Glued-Laminated products shall be treated compatible with their manufacturing process.
7. Pentachlorophenol EPA registration is discontinued but remains allowable while supplies are available.
8. See also FPL General Technical Report No. 275 for availability and uses of treated timber alternatives.
9. Uses or products not covered within shall be reviewed with Regional Bridge Program Manager.