

National
Wood In Transportation
Information Center

CROSSINGS

NEWSLETTER OF THE WOOD IN TRANSPORTATION PROGRAM



Editor - Tira than Cojer

Issue 31

August 1998

Certification of BMP Treated Wood Products

A Quality Assurance Program for use with *The Best Management Practices (BMPs) for the Use of Treated Wood In Aquatic Environments* (see [BMPs for Treated Wood - A Better Product for Aquatic Applications](#) article in the August 1997 issue of *Crossings*) is now in place and available to the market. The BMPs were developed by the Western Wood Preservers Institute (WWPI) and the Canadian Institute of Treated Wood (CITW) to assure that treated wood products are produced and installed in a manner which minimizes any potential for adverse impacts to aquatic environments.

Designers, regulators, and owners in the western United States and Canada are encouraged to specify the use of BMPs and to require certification via a 3rd party inspection agency quality assurance program. Assurance that the materials meet the BMP requirements can be provided in either of two ways:

- **Written Certification**

The producer may provide assurance of production in conformance with the BMPs in the form of a written certification document from a 3rd party inspection agency. The third party inspection should be performed under the *Quality Assurance Inspection Procedures for Best Management*

Continued on page 2

Fiscal Year 1999 Wood In Transportation Demonstration Grants Program

The Wood In Transportation (WIT) Program, formerly known as the National Timber Bridge Initiative, has funded over 322 demonstration timber bridge projects in 48 states during the last nine years. More than 195 have been completed, and they are demonstrating the use of wood in transportation applications. Much has been learned to improved designs and extend the life of wooden structures.

The WIT Program anticipates about \$300,000 in funding for the fiscal year 1999 demonstration program. Because of this limited funding, the cost-share program will focus on commercializing sound and economical technology that has been developed during the last nine years of the WIT Program. We plan to fund at least three "commercialization projects" in fiscal year 1999. The maximum Forest Service grant for any project will be \$150,000. (The ideal scenario would be funding three projects at about \$100,000 per project.)

A commercialization project is a cooperative project in which the USDA Forest Service shares the cost with partners willing to share the benefits and commercial opportunities with others. These partners will work closely with Forest Service personnel to ensure that structurally adequate and economical wooden structures are built in a way that maintains strict quality control and provides a means to monitor the structures' performance. The intended outcome of these projects will be structures that showcase Wood In Transportation technology and provide useful design and cost information for potential users in other parts of the nation. An example of a commercialization project is the construction of four bridges using the same basic design that preferably uses local timber resources in a single-county or multi-county area.

Continued on page 2



Certification of BMP Treated Wood Products . . . *continued from page 1*

Practices (BMPs) for Use of Treated Wood In Aquatic Environments (see below) available from WWPI or CITW. Inspection agencies accredited under the American Lumber Standards Committee's (ALSC) Treated Wood Program, or equivalent, should be used to perform these inspections and provide the written certification.

- **BMP Quality Assurance Mark**

The material may carry the registered BMP mark as part of the treating stamp or end tag on the material to be used in an aquatic environment. Use of this mark is licensed by WWPI to producers and inspection agencies who, by formal agreement, participate in the BMP quality assurance program. The presence of the mark certifies that the material was produced by a licensed producer in conformance with the BMPs and inspected by a licensed inspection agency under the third party quality assurance program procedures. Only ALSC accredited inspection agencies are accepted for certification under the BMP Mark Program.



One of these two BMP quality assurance certifications should be required by the material specifications of a contract that includes treated wood products. The USDA Forest Service specifies that wood be treated in conformance with the BMP standard nationwide for timber structures installed on lands managed by the Agency. This is specifically referenced in the publication, *Forest Service Specifications for Construction of Roads and Bridges*. The text is found in Section 557-Timber Structures, Section 557.02 (b): Lot certification of each charge for preservative, penetration in millimeters, and retention in kilograms per cubic meter (assay method) by a qualified independent inspection and testing agency. In addition, have the producer of the treated products provide written certification that BMPs, in accordance with *Best Management Practices for Treated Wood in Western Aquatic Environments* published by the Western Wood Preservation Institute and Canadian Institute of Treated Wood, were followed. In this written certification, include the description and

the appropriate documentation of the applicable BMPs used. In addition, Wood In Transportation demonstration projects funded in fiscal year 1999 will be required to follow the BMPs listed in the publication, *Best Management Practices for Treated Wood in Western Aquatic Environments*.

For a list of BMP Mark Program participants and/or a free copy of the BMPs, contact WWPI at 1-800-729-9663, FAX at 360-693-9967 or email at wwpi@teleport.com.

— R. Dennis Hayward
Executive Director
Western Wood Preservers Institute
Vancouver, WA

— Merv Eriksson
Structural Engineer
USDA Forest Service
Missoula, MT

Quality Assurance Inspection Procedures for Best Management Practices (BMPs) for the Use of Treated Wood in Aquatic Environments outlines a quality assurance inspection and certification procedure developed and controlled by the WWPI. This procedure was developed to improve quality control of wood treatment, ensure supply of treated wood conforming to BMPs when specified, and provide a proactive approach for the appropriate management of treated wood products. For additional details, contact the WWPI.

Fiscal Year 1999 Wood In Transportation Demonstration Grants Program ... *continued from page 1*

If you are interested in receiving a WIT Project Application, please contact the National Wood In Transportation Information Center at 304-285-1591 (phone) or 304-285-1564 (FAX).

Specifying Treated Timber for Bridges

The following information is a partial reprint of "Chapter 4: Preservation and Protection of Timber Bridges, pages 4-23 and 4-24" from the publication, *Timber Bridges - Design, Construction, Inspection, and Maintenance*. For a copy, contact the National Wood In Transportation Information Center at 304-285-1591 (Phone) or 304-285-1564 (FAX).

Although properly used preservative treatments will provide a long service life for wood products, the manner in which a commodity is specified can have a significant impact on its performance. Factors related to treatment preparations, processes, and results must all be carefully considered and specified, not only to ensure performance, but also to protect the buyer against inferior products. This section discusses treatment specifications, standards, and design considerations related to timber bridge applications. Methods of specifying treated timber, including typical specifications, also are addressed.

Specifications and Standards

The American Wood Preservers' Association (AWPA), the American Association of State Highway and Transportation Officials (AASHTO), the American Institute of Timber Construction (AITC), and the Federal Government maintain specifications and standards for the preservative treatment of wood. The AWPA standards are the most widely used and most comprehensive standards and are the recommended source of specifications and treating process procedures for sawn lumber, glulam, piling, and poles used for timber bridges. The AASHTO (M133), AITC (AITC 109), and Federal standards directly reference or closely parallel the AWPA standards.

The AWPA standards are prepared by technical groups that consist of wood treaters, users, and general interest parties who assemble technical information to develop recommendations for the use of treated wood in specific environments. They contain requirements for the composition of preservatives and solvents, penetration and retention for various species and users, and analytical procedures to ensure that treatment requirements are met. Also included are limits for pressures, temperatures, and exposure times during conditioning and treatment to avoid conditions that adversely affect strength or other wood properties. The standards are results oriented and are generally stated as minimums or acceptable levels over designated ranges of values. This flexibility is intended to permit the purchaser and treater some latitude in meeting treatment requirements for specific applications without damaging the wood.

A book of AWPA standard is published annually and is available at nominal cost from AWPA. The book is divided into five basic categories consisting of

1. preservative standards (P-standards),
2. commodity standards (C-standards),
3. analytical methods (A-standards),
4. miscellaneous standards (M-standards), and
5. conversion factors and correction tables (F-standards).

The standards in these five groups are cross-referenced and address a wide variety of timber products, many of which are not related to bridge applications. Although the standards may seem confusing at first glance, they contain a wealth of information and, with experience, are relatively simple to use. It is important that the designer obtain a current copy of these standards and become familiar with the contents prior to specifying treated timber.

NEW PUBLICATIONS



Research Accomplishments for Wood Transportation Structures Based on a National Research Needs Assessment

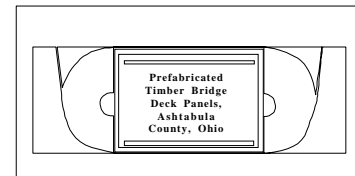
In 1991, the USDA Forest Service, Forest Products Laboratory (FPL), and the Federal Highway Administration (FHWA) formed a joint cooperative research program for wood transportation structures. Development and execution of this program was based on a national assessment of research needs and priorities. In the five years since completion of the research needs assessment, significant research has been completed or is ongoing for wood transportation structures. This publication provides a summary of the research accomplishments of the joint FPL-FHWA research program for wood transportation structures.

To obtain a copy of this report, please contact the National Wood In Transportation Information Center at 304-285-1591 (phone) or 304-285-1564 (FAX) and request publication number WIT-11-0020.

Prefabricated Timber Bridge Deck Panels, Ashtabula County, Ohio (Video)

This just released video illustrates a relatively low-cost method for fabrication of timber decks over steel girders using methods developed by John Smolen, County Engineer, Ashtabula County, Ohio. This video is approximately 13 minutes in duration and discusses details such as design, appropriate material specification, in-house fabrication, and deck installation.

To obtain a copy of this video, please contact the National Wood In Transportation Information Center at 304-285-1591 (phone) or 304-285-1564 (FAX) and request video number WIT-97-0026.



Article contributions, questions or comments may be sent to Ed Cesa, Program Manager, National Wood In Transportation Information Center or Ms. Tinathan A. Coger, Information Assistant; USDA Forest Service; 180 Canfield Street; Morgantown, WV 26505; Phone: 304-285-1591 or 304-285-1596; or FAX: 304-285-1505; or E-mail to tcoger/na_mo@fs.fed.us.

Crossings is a service of the USDA Forest Service, Northeastern Area, State and Private Forestry, and is distributed quarterly to individuals and organizations without fee. Products, designs, and treatments mentioned by contributors from outside the USDA are not necessarily endorsed by the USDA, nor do statements made herein reflect the policy of the USDA. In all cases, consult with appropriate professional and state or local regulatory agencies for conformance to applicable laws and regulations.

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint, write the Secretary, U.S. Department of Agriculture, Washington, DC 20250, or call 1-800-245-6340 (voice), or 202-720-1127 (TDD). USDA is an equal employment opportunity employer.