INTRODUCTION

- Given today’s global trade and marketing system, the likelihood of finding non-compliant WPM is possible in any pathway
OVERVIEW

- The following will be covered:
  - WHY are we concerned?
    - Includes a snapshot of the devastating ecological and economic damage caused by invasive forest pests now here in the US from non-compliant WPM.
  - Definition and intent of the WPM regulations
  - Examples of compliant WPM
  - Examples on non-compliant WPM (what we are looking for)
  - WHAT you can do
    - Things you (import & trade components) can do to reduce the risk associated with wood packaging material.

Photo from Blaine POE of Cerambycidae larvae extracted from WPM housing a shipment of auto parts.
WHY are we concerned?

- There are significant pest risks associated with wood packaging material (WPM), which also threaten American agriculture and forests.
- Unchecked spread of wood boring pests could cause billions of dollars of damage to ornamental trees and forests and lumber industries
- Trading partners could experience increased costs due to non-compliant WPM

Photo of discarded wooden pallets at a wood bark mulch facility in Pennsylvania.
WHY are we concerned?

- Ecological and Economic Impact of Asian Longhorn Beetle
- If the beetle spreads out of its current urban environment into natural forests, it has the potential to seriously alter the ecological diversity of the natural forests in North America, with additional impacts on wetlands. The potential impact to forests is the loss of 71 billion trees valued at over $2 trillion dollars (GAO 2006).
- A further impact of Asian Longhorn Beetle in the United States is the cost of eradication measures. Collectively, from 1997 to 2006, APHIS and the states of New York, Illinois and New Jersey and local government agencies have spent more than $800 million on ALB eradication measures (Smith and Wu 2008).
- As of 2015, APHIS and State personnel are fighting ALB infestations in 3 States: New York, Massachusetts, and Ohio.
- Threatened resources include: tree cover, fuel, fiber, wood for lumber, cooling shade and wind breaks for homes and businesses, landscaping, fish and wildlife habitat, watershed conservation, esthetics, maple syrup production, aesthetics and other industries dependent on this tree resource.
WHY are we concerned?

- Ecological and Economic Impact of Emerald Ash Borer (EAB)
- As of 2011, over 50 million trees have been cut down due EAB. EAB probably arrived in the United States on WPM carried in cargo ships or airplanes originating in its native Asia. EAB is also established in Windsor, Ontario, and infestations have been detected in 25 states: Arkansas, Colorado, Connecticut, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and Wisconsin.
- EAB has:
  o Killed tens of millions of ash trees in various states within the United States
  o Caused regulatory agencies and the USDA to enforce quarantines and fines to prevent potentially infested ash trees from moving out of areas where EAB occurs
  o Costs municipalities, property owners, nursery operators and forest products industries tens of millions of dollars
WHY are we concerned?

- When Emerald Ash Borer (EAB) was found initially in 2002. The insect had already spread over 2500 sq. miles in Michigan.
- As of 2011, over 50 million trees have been cut down due to EAB infestation. EAB has spread into the Midwest, and previous named states within the US.
- EAB kills the trees, which in turn, fall onto power lines that causes extensive power outages during storms.
- Losses are estimated in the tens of millions of dollars.
- EAB is so aggressive that ash trees may die within two or three years after they become infested.

- The photographs show EAB damage in Canton Township, Detroit, Michigan - where ironically ash trees were planted to replace the elms, previously destroyed by Dutch Elm Disease.
EAB spread as of February 2016. Eradication efforts are ongoing, but have failed to stop the spread of this pest.
WPM Regulations

International Standards for Phytosanitary Measures (ISPM 15) – Regulation for Wood Packaging Material in International Trade

- Wood may be infested
- WPM a viable pathway for pest introduction
- Intent – significantly reduce the risk of introduction and spread of most quarantine pests associated with WPM

BASIS for the WPM REGULATION

- International Standards for Phytosanitary Measures (ISPM 15) – Regulation for Wood Packaging Material in International Trade.
- Wood originating from living or dead trees may be infested by plant pests.
- WPM is frequently made of raw wood that may not have undergone sufficient processing or treatment to remove or kill pests and therefore remains a pathway for the introduction and spread of quarantine pests.
- Dunnage, in particular, has been shown to present a high risk of introduction and spread of quarantine pests.
- WPM is very often reused, repaired or remanufactured.
- The true origin of any piece of wood packaging material is difficult to determine, thus its phytosanitary status cannot easily be ascertained.
- Therefore, the normal process for analyzing pest risk to determine if measures are necessary (and the strength of such measures) is frequently not possible for WPM.
- For this reason, this IPPC standard (ISPM 15) describes internationally accepted measures that may be applied to WPM by countries to reduce significantly the risk of introduction and spread of most quarantine pests that may be associated with that material.
WPM Regulations

Wood packaging material is defined as:
Wood or wood products (excluding paper products) used in supporting, protecting, or carrying a commodity (includes dunnage).

Definition of WPM

- WPM is defined as wood or wood products (excluding paper products) used in supporting, protecting, or carrying a commodity (includes dunnage).
## WPM Regulations

Wood packaging material include, but it is not limited to:

<table>
<thead>
<tr>
<th>Bins</th>
<th>Boxes</th>
<th>Bracing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Spools</td>
<td>Cases</td>
<td>Crates</td>
</tr>
<tr>
<td>Dunnage</td>
<td>Load Boards</td>
<td>Pallets</td>
</tr>
<tr>
<td>Pallet collars</td>
<td>Skids</td>
<td></td>
</tr>
</tbody>
</table>

## Examples of types of WPM

- Different types of wood packing material used to import not only agricultural, but also non-agricultural products.
  - Bins
  - Boxes
  - Bracing
  - Cable Spools
  - Cases
  - Crates
  - Dunnage
  - Load Boards
  - Pallets
  - Pallet collars
  - Skids
In general, WPM does not include:

- WPM made entirely from thin wood 6 mm or less in thickness.
- WPM made wholly of processed wood material, such as plywood, particle board, oriented strand board or veneer that has been created using glue, heat or pressure, or a combination thereof.
- Sawdust, wood shavings and wood wool.

Examples of WHAT IS NOT WPM

- In general, WPM does not include:
  - WPM made entirely from thin wood 6 mm or less in thickness
  - WPM made wholly of processed wood material, such as:
    - plywood
    - particle board
    - oriented strand board or veneer that has been created using glue, heat or pressure, or a combination thereof
  - Sawdust
  - Wood shavings
  - Wood wool
Examples of WPM

- Pallets— found in all environments and all pathways
- Boxes
- Bracing
Examples of WPM

Dunnage / Bracing

Examples of WPM

- Discarded bracing/dunnage from a maritime vessel
Examples of WPM

- Dunnage/Bracing from maritime vessels
Examples of WPM

Crates

• Crates – Found in all environments and all pathways, pictured here with non-agricultural products.
Examples of WPM

Crates

• Crates – Found in all environments and all pathways. This is an example of agricultural product (melon) shipped in crates.
Examples of WPM

- Bracing – Found in all environments and all pathways.
**Examples of WPM**

- Bracing – Found in all environments and all pathways.
Examples of WPM

Pallets

EXAMPLES of WPM

- Pallets- Found in all environments and all pathways.
Compliant WPM

- Valid IPPC logo
- No presence of WPM pests
- No indication of WPM pests

Compliant WPM

- Official components of the ISPM 15 Standard for stamped WPM—No paper certification is required.
- Valid logo with no WPM pests or indication of pests.
INTERNATIONAL PLANT PROTECTION CONVENTION IPPC Logo

- A multilateral international treaty dealing with preventing the spread and introduction of plant pests with 163 Signatory governments formed through the Food and Agriculture Organization (FAO) of the United Nations
- Two (2) Treatment/Processing Options:
  - Heat Treatment (HT)
  - Fumigation with Methyl Bromide (MB)
- Accepted by all signatory countries, for all types of wood allowing for free movement of WPM regardless of country of origin
- Official Components of the ISPM 15 Standard for the mark on the wood – No paper certification is required.
  - IPPC logo
  - XX signifies the two-letter country code
  - 000 signifies the unique facility number within the country
  - YY signifies either the method of treatment HT or MB
- WPM that is marked and certified in compliance with ISPM 15 may be reused regardless of country of origin
- ISPM 15 compliant WPM that has been repaired or remanufactured must be recertified under the HT or MB options
Variations allowed as per ISPM 15
Correct IPPC Logo

- WPM found to be properly marked, no presence of WPM pests, no evidence of WPM pests, and has been treated by either of the approved methods identified under 7 C.F.R §319.40-3(b)(1) is compliant.
- These are examples of correct IPPC logos.
Correct IPPC Logo

Here are other examples of correct IPPC logos.
## Pests of Concern

<table>
<thead>
<tr>
<th>Family</th>
<th>Pest Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buprestidae</td>
<td>Metallic beetles</td>
</tr>
<tr>
<td>Cerambycidae</td>
<td>Long horned beetles</td>
</tr>
<tr>
<td>Cossidae</td>
<td>Carpenter moths &amp; Leopard moths</td>
</tr>
<tr>
<td>Curculionidae</td>
<td>Bark weevils</td>
</tr>
<tr>
<td>Platypodidae</td>
<td>Pinhole borers</td>
</tr>
<tr>
<td>Scolytinae</td>
<td><strong>Bark beetles (most common intercept)</strong></td>
</tr>
<tr>
<td>Sesiidae</td>
<td>Clearwing moths</td>
</tr>
<tr>
<td>Siricidae</td>
<td>Wood wasps</td>
</tr>
</tbody>
</table>

Pests of Concern:

This is a list of the eight (8) families of plant pests of concern which are associated with WPM. Infestation of WPM by any one of these eight families confirms that the WPM was not treated in accordance with 7CFR 319.40-3(b)(1).

- Buprestidae – Metallic beetles (Ex: Emerald ash borer)
- Cerambycidae – Long horned beetles (Ex: Asian longhorn beetle) **2nd most** prevalent interception found by CBP on non-compliant WPM
- Cossidae – Carpenter moths & leopard moths
- Curculionidae – Bark weevils
- Platypodidae – Pinhole borers
- Scolytidae – Bark beetles – **Most** prevalent interception found by CBP on noncompliant WPM
- Sesiidae – Clearwing moths
- Siricidae – Wood wasps
Comparative Insect Sizes

- Insects and growth stages vary in size. Note the very small Buprestidae larvae on the penny and the adult Scolytinae (Bark Beetle) on the pencil tip.
Pests of Concern

- Adults and larvae are found on non-compliant WPM. Here are a few examples of some adult plant pests.
Top Commodities Found with Infested WPM

- A wooden crate filled with fresh fruits
- Pallets
- Heavy products on pallets
Commodities with Highest Incidence of WPM Pests

Top High Risk Commodities

- Manifested WPM
- Machinery (including Auto Parts)

Top High Risk Commodities Found on Infested WPM

- Manifested WPM (e.g. pallets)
- Machinery
Commodities with Highest Incidence of WPM Pests

Top High Risk Commodities

- Metal Products
- Stone Products (including tile)

Top High Risk Commodities Found on Infested WPM

- Metal Products
- Stone Products
Commodities with Highest Incidence of WPM Pests

Additional High Risk Commodities

1. Electronics/Electronic Components
2. Finished Wood Articles
3. Plant Products and Foodstuffs

Addition High Risk Commodities:

- Electronics/ Electronic Components
- Finished Wood Articles
- Plant Products and Foodstuffs (packaging material)

Left photo of a shipment of rustic furniture with feeding damage from Cerambycidae at the Nogales POE.
Right photo of a shipment of Kabocha Squash in wooden crates infested with Scolytidae at the Nogales POE.
Indicators of WPM Pest Presence

- Large round exit holes
- Feeding damage
- “Engravings”
- Snake-like trails
Wood Packaging Material (WPM) – Trade Outreach

Indicators of WPM Pest Presence

- Presence of frass (looks like sawdust)
Non–Compliant WPM

- Inappropriately marked WPM

Non-Compliant WPM

- WPM that is encountered by CBP during the course of inspection and found to be inappropriately marked or illegibly marked is assumed to be untreated by either of the approved methods identified under 7 C.F.R §319.40-3(b)(1).
- This is an example of inappropriately marked WPM.
Non–Compliant WPM

- Inappropriately marked WPM

Non-Compliant WPM

- WPM that is encountered by CBP during the course of inspection and found to be inappropriately marked or illegibly marked is assumed to be untreated by either of the approved methods identified under 7 C.F.R §319.40-3(b)(1).
- This is another example of inappropriately marked WPM.
Non-Compliant WPM

- Inappropriately marked WPM

Non-Compliant WPM

- WPM that is encountered by CBP during the course of inspection and found to be inappropriately marked or illegibly marked is assumed to be untreated by either of the approved methods identified under 7 C.F.R §319.40-3(b)(1).
- Another example of inappropriately marked WPM.
Non-Compliant WPM

- WPM that is encountered by CBP during the course of inspection and found not bearing the required treatment and markings required under 7 C.F.R. §319.40-3(b)(1) and C.F.R. §319.40-3(b)(2) is non-compliant.
- These are examples of unmarked WPM.
Non–Compliant WPM

- Unmarked WPM that is encountered by CBP during the course of inspection and found not bearing the required treatment and markings required under 7 C.F.R. §319.40-3(b)(1) and C.F.R. §319.40-3(b)(2) is non-compliant.
- These are examples of unmarked WPM.
Non–Compliant WPM

- Unmarked WPM

Non-Compliant WPM

- These are additional examples of unmarked WPM.
Non-Compliant WPM

- Infested with or shows evidence of pests

WPM that is infested with a named pest confirms that the WPM has not been treated in accordance with 7 C.F.R §319.40-3(b)(1).

This is an example of WPM infested with a pest.
Non–Compliant WPM

- Infested with or shows evidence of pests

This is another example of WPM infested with a pest
Non–Compliant WPM

- Infested with or shows evidence of pests

Non-Compliant WPM

- This is another example of pest infested WPM.
Wood Packaging Material (WPM) – Trade Outreach

Non–Compliant WPM

- Bark

Non-Compliant WPM

- WPM with bark that is unmarked is non-compliant.
- This is an example of bark on WPM.
Non–Compliant WPM

- This is another example of unmarked WPM with bark.
- The non-compliant pallets were accompanied by a prepared statement from the shipper indicating that they were made from plywood and complies with the IPPC standard for wood packaging materials. Upon further inspection, the pallets were found to actually be composed of solid wood concealed by an outer veneer sheet. Again bark is not included in this regulation.
New/Old/Mixed WPM

Condition of WPM

- New
  - Fresh; green; sap visible
  - High pest probability
- Old
  - Very low moisture content, re-used
  - Visually damaged
  - Low pest probability
- Mixed
  - Combination of above

New/Old Mixed WPM

- New
  - Fresh, green cut sap visible
  - Higher pest probability
- Old
  - Very low moisture content, re-used
  - Visually damaged
  - Lower pest risk
- Mixed
  - Combination of above
What Can You Do to Comply with ISPM 15?

- Ensure your WPM provider is accredited ISPM 15 compliant
- Educate your supply chain on the ISPM 15 requirements
- Know alternatives to WPM – Cost Benefit Analysis
- Remember there is a financial cost for noncompliance

What can Your Business Do to Comply with ISPM 15?

- Non-compliance can be a serious problem for your ocean freight export or import.
- Ask your WPM provider if they are ISPM 15 compliant and accredited
- Provide information on the ISPM 15 standard
- Give them contact information regarding how to become compliant (websites, contact numbers)
- Alternatives to WPM:
  - Plastic or metal pallets
  - Pallets and crating manufactured from manufactured wood products (OSB, Plywood, Cardboard)
- Do a cost benefit analysis if considering alternatives to wood packaging materials
- Be aware of US and foreign countries’ timelines for implementation
- Realize there is financial cost to the supply chain and potential ecological cost to the natural resources of the United States.
Benefits of Compliance

- Fewer delays for cargo release
- Less demmurage charges due to cargo holds
- Avoidance of penalties for violative WPM
Cost of Noncompliance

- WPM that does not have the ISPM 15 stamp must be re-exported
- WPM with the ISPM 15 stamp but found to contain a wood boring insect must be re-exported
- WPM with the ISPM 15 stamp but found with a hitchhiking pest (non-wood boring) may be fumigated by APHIS/PPQ

Please check the APHIS website dedicated to WPM for updates on WTO notifications or contact an APHIS official:

Self-Report to Assist CBP

- CBP would like the trade community to assist with minimizing the risk of untreated or inadequately treated WPM that enters the US without CBP detection.

CBP wants to establish a pathway for trade to report to CBP when their goods enter the US on infested WPM without CBP detection. The objective is to mitigate the pest risk.
Why Self-Report Noncompliant WPM?

- Foster trusting partnerships for safeguarding against violative WPM
- Consistent self-reporting may lead to mitigating factors in the event of civil penalties or liquidated damages related to violative WPM
- Those stakeholders may potentially increase business certainty due to their internal controls

Why Self-Report Non-Compliant WPM

- By implementing self-inspection practices for WPM, importers demonstrate to CBP that they can be trusted partners for safeguarding against violative WPM. In turn, this may result in a reduction in CBP inspections of WPM.
- This translates into substantial monetary savings.
- Consistent self-reporting may also be considered as mitigating factor in the event of civil penalties or liquidated damages related to non compliant WPM.
- Importers will have increased business certainty because a system of internal control helps to ensure compliant transactions.
Actions to Take if Non-Compliant WPM is Encountered at Your Location

- Follow through with the **SIN** principle
  - **S** = Secure
  - **I** = Isolate
  - **N** = Notify

Actions to Take

- Adhere to the SIN principle Secure, Isolate, and Notify.
- Secure: If there are pests or evidence of a pest, cover the shipment with tarp or shrink wrap. If possible, return the shipment to a container and seal the container door.
- Isolate: Separate the shipment or container from compliant shipments.
- Notify: Contact your local CBP office or PPQ office to advise of the non-compliant WPM.
- In any instance in or around the port of entry, contact CBP and CBP can refer to USDA.
Wood Packaging Material Review

- Ecological and Economic Impact
- Purpose and Importance of WPM Regulations
- Quarantine Pests of Concern
- Examples of Violative WPM
- What You Can Do

Note: If you or your employees find wood boring insects; or wood packaging material that is inappropriately marked, unmarked, or shows signs of insect activity, please keep the shipment in a secure location, preferably a sea container or trailer. Contact U.S. Customs and Border Protection to speak to an Agriculture Specialist so prompt quarantine action can be taken.
For More Information Contact:

Department of Homeland Security  
U.S. Customs and Border Protection  
Office of Field Operations  
Agriculture Programs and Trade Liaison

APTL Program Manager - Safeguarding  
Office: (202) 344-3298  
Address: DHS, CBP, OFO, APTL  
1300 Pennsylvania Ave., NW  
Room 2.5B  
Washington, D.C. 20229

For more information:

- Contact CBP in your local area for more information