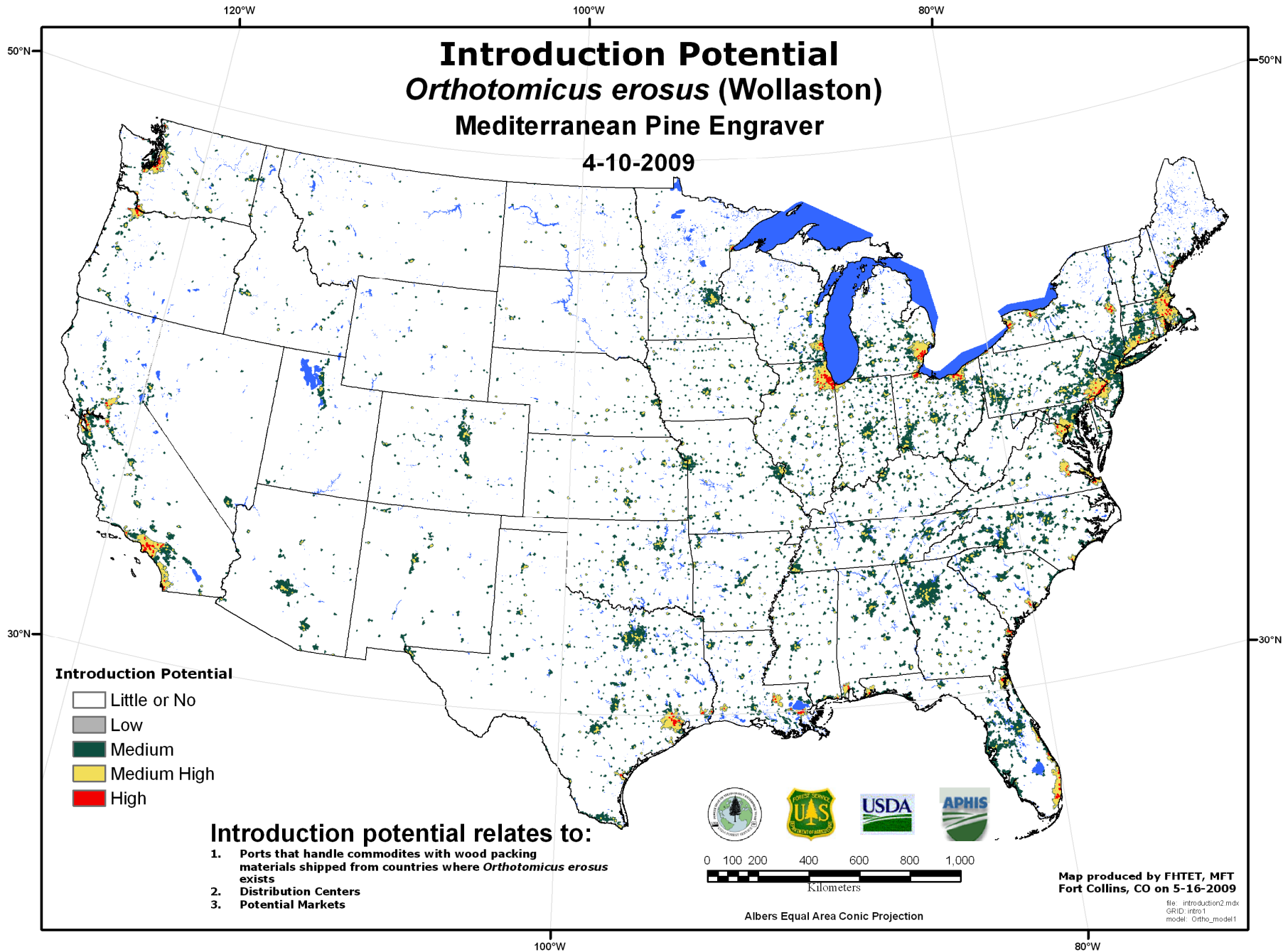







# Introduction Potential *Orthotomicus erosus* (Wollaston) Mediterranean Pine Engraver

4-10-2009

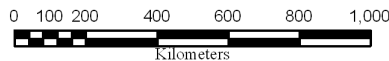


### Introduction Potential

-  Little or No
-  Low
-  Medium
-  Medium High
-  High

### Introduction potential relates to:

1. Ports that handle commodities with wood packing materials shipped from countries where *Orthotomicus erosus* exists
2. Distribution Centers
3. Potential Markets



Albers Equal Area Conic Projection

Map produced by FHTET, MFT  
Fort Collins, CO on 5-16-2009

file: introduction2.mxd  
GRID: intro1  
model: Ortho\_model1

**Summary of Introduction Potential for *Orthotomicus erosus* (Wollaston)  
Mediterranean Pine Engraver; April 10, 2009**

**Website URL: [http://www.fs.fed.us/foresthealth/technology/invasives\\_orthotomicuserosus\\_riskmaps.shtml](http://www.fs.fed.us/foresthealth/technology/invasives_orthotomicuserosus_riskmaps.shtml)**

The Introduction Potential Surface for *Orthotomicus erosus* (*O. erosus*) was produced for the Conterminous United States (CUS) in 1-square-kilometer (km<sup>2</sup>) units by the U.S. Forest Service, Forest Health Technology Enterprise Team's (FHTET) Invasive Species Steering Committee (Table 1). The product's intended use, in conjunction with the Establishment Potential Surface, is to develop a Susceptibility Potential Surface for *O. erosus*. Supporting information was taken from the Exotic Forest Pest (ExFor) website (<http://spfnic.fs.fed.us/exfor/>). Three primary datasets with standardized values from 0 to 10 were used as variables in the analysis: 1) Principal Ports, 2) Distribution Centers, and 3) Potential Markets. Each data set was multiplied by its arithmetic weight (Table 2), and the resultant values were combined in an equal weighted overlay. The output values also range from 0 to 10, with 10 having the highest introduction potential. Each of the variables were used to depict potential locations where *O. erosus* could be released into the CUS. To delineate its potential flight range, a curvilinear distance decay value was assigned with a risk value of 10 at the source location and decreasing to 0 at 5 kilometers away (Table 3).

**Principal Ports** A summary of imported tonnage of commodities that use Wood Packing Material (WPM), the packing material associated with *O. erosus* interceptions, recorded in the APHIS Pest Interception Network (PIN) 309 data base. Only commodities exported from countries where *O. erosus* is present were included. This point data was converted to 1 km<sup>2</sup> grid cells. Source: Army Corps of Engineer, Waterborne Commerce, Foreign Cargo Statistics (1996 to 2003).

**Distribution Centers** Distribution centers that handle commodities that likely use WPM during transport were considered. Source: National Transportation Atlas Database (2003). Furthermore, 193 distribution centers were added and were provided by the following companies: FedEx, IKEA, Kmart, KOHL's, Lowe's, OfficeMax, PETCO, Target, The Home Depot, and Wal-Mart.

**Potential Markets** Cities polygons that had any truck trips were selected to define potential markets. Flow/capacity data was used to determine the number of truck trips occurring within the city polygons. Sources: Federal Highway Administration, Freight Management and Operations, Freight Analysis Framework, Highway Truck Volume and Capacity Data and \*Environmental Systems Research Institute's (ESRI) City polygon data.

**Table 1**

**Steering Committee**

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**Table 2**

Introduction Variables and Arithmetic Weights

Variables	Weight
Principal Ports	33.33%
Potential Markets	33.33%
Distribution Centers	33.33%

**Table 3**

Distance decay for probable flight range of *O. erosus*

Distance in km	Value
> 0 and <= 1	10
> 1 and <= 2	5
> 2 and <= 4	1
> 4	0

**Point of Contact**

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