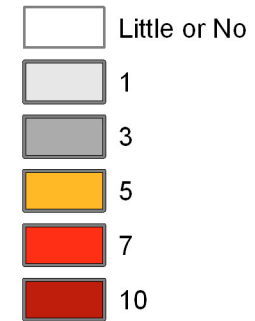
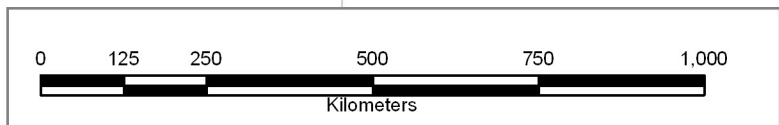


Alaska
Ips typographus
European Spruce Bark Beetle
Introduction
3/21/2007

Legend



- Introduction potential relates to:**
- 1. Ports that handle commodities and soild wood packing materials shipped from countries where *Ips typographus* exits**
 - 2. Distribution Centers**
 - 3. Potential Markets**



Summary of Introduction Potential for *Ips typographus* Alaska USA March 21, 2007

Website URL:

www.fs.fed.us/foresthealth/technology/invasives_ipstypographus_AK_riskmaps.shtml

The Introduction Potential Surface for *Ips typographus* was produced for the State of Alaska in 1 square kilometer (km²) 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 is to develop a Susceptibility Potential Surface for *Ips typographus*. Supporting information was taken from the Exotic Forest Pest (ExFor) website (<http://spfnic.fs.fed.us/exfor/>). Two datasets depicting Principal Ports and Distribution Centers with standardized values from 0 to 10 were used as variables in the analysis. Each data set was combined via a maximum overlay. The final Introduction Surface output values also range from 0 to 10, with 10 having the highest potential of introduction. Each of the variables was used to depict potential locations where *Ips typographus* could be released into the State of Alaska. 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 6 kilometers away (Table 2). The value in Table 2 is calculated by the following formula (Potential (in Percent) * 10).

Principal Ports and Distribution Centers were derived via two data sets: 1) Using cities that occurred the Environmental Systems Research Institute's (ESRI) City polygons Data (ESRI Polygons) for the State of Alaska, and 2) The City Lights Raster Data set from ESRI (City Lights). All named cities in the State of Alaska were selected from the ESRI polygon data set. Cities were labeled either Ports or Distributions centers based upon the location with respect to an Ocean or Bay. Additional Ports or Distribution Centers were derived from the City lights data. That is, local experts identified additional Ports and Distribution Centers that were not in the ESRI Polygon data set; but, were easily located via the City Lights data set.

Table 1

Steering Committee

Marla C. Downing, USDA, FS, FHTET, Lead
Mark Schultz, USDA, FS
Michael Shephard, USDA, FS

Table 2

Distance decay for probable flight range
of *Ips typographus*

| Distance in Km | Potential % | Value |
|----------------|-------------|-------|
| > 0 and <= 1 | 100 | 10 |
| > 1 and <= 2 | 70 | 7 |
| > 2 and <= 4 | 40 | 4 |
| > 4 and <= 5 | 20 | 2 |
| > 5 and <= 6 | 10 | 1 |
| > 6 | 0 | 0 |

Point of Contact

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