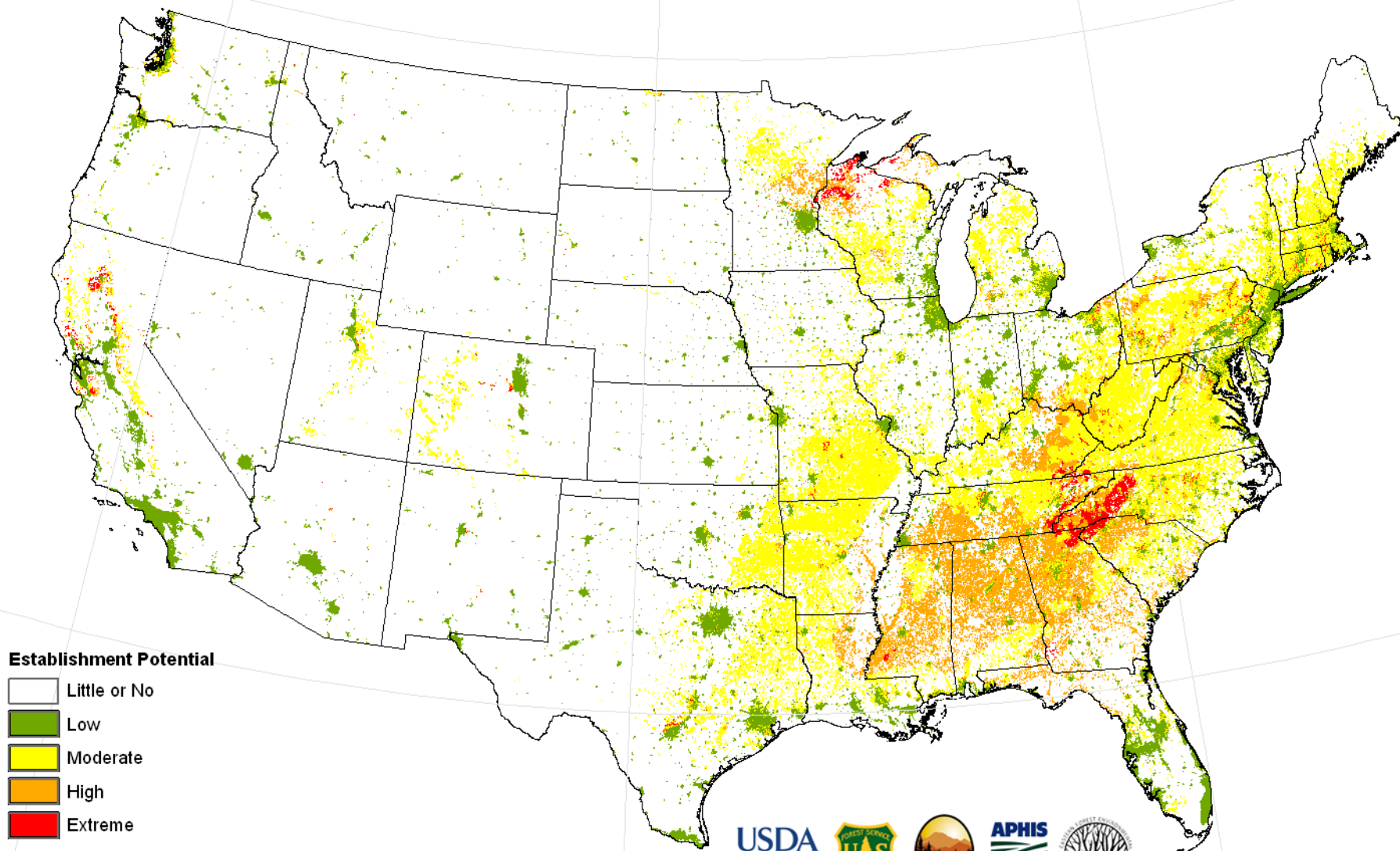


Establishment Potential *Agrilus sulcicollis* (Lacordaire) --- European Oak Borer 1/27/2011

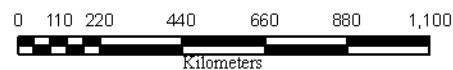


Establishment Potential

-  Little or No
-  Low
-  Moderate
-  High
-  Extreme

Establishment potential is a function of an equal weighted overlay of:

- a) Oak Host
- b) Drought (from 2007 - 2009)
- c) Urban Forest from NLCD



Albers Equal Area Conic Projection

Map produced by FHTET, IL
Fort Collins, CO on 1-27-2011
file: as_estab_map.mxd
Project: *Agrilis* sp.

**Summary of Establishment Potential for *Agrilus sulcicollis* (Lacordaire)
European Oak Borer; January 27, 2011**

Website URL: http://www.fs.fed.us/foresthealth/technology/invasives_agrilussulcicollis_riskmaps.shtml

The Establishment Potential Surface for *Agrilus sulcicollis* (*A. sulcicollis*) was produced for the Conterminous United States (CUS) in 1-square kilometer (km²) units by the U.S. Forest Service, Forest Health Technology Enterprise Team's (FHTET) *A. sulcicollis* Invasive Species Steering Committee. The product's intended use in conjunction with the Introduction Potential Surface is to develop a Susceptibility Potential Surface for *A. sulcicollis*. Supporting information was taken from Haack et al. (2009)¹ and Jendek and Grebennikov (2009)². Three primary datasets (Table 1) were used as variables in the analysis: Oak host from the Forest Inventory and Analysis (FIA) data base, drought created with PRISM³ data from from 2007 – 2009, and urban forest derived from NLCD. The Drought data were partitioned into 4 classes (0 = No drought, 3 = 1 year of drought, 6 = 2 years of drought, and 10 = 3 years of drought) and combined with the Oak presence host surface to produce disturbed natural host. The urban forest was calculated via the percent area of the one km² cell that contained either deciduous or mixed forest types as described by NLCD. The urban forest data were then partitioned into 10 classes (0 – 10) using Jenks' Natural Breaks and combined with disturbed natural host via a maximum overlay to produce the final Establishment potential. Figure 1 illustrates the data analysis process. The final product was partitioned into five risk classes: Little or No, Low, Moderate, High, and Extreme.

Steering Committee

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Table 1: Establishment Variables

Variables
Oak Host (FIA)
Drought
Urban Forest

Point of Contact

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References:

1. Haack, Robert A.; Petrice, Toby R.; Zablotny, James E. 2009. First report of the European oak borer, *Agrilus sulcicollis* (Coleoptera: Buprestidae), in the United States. *Great Lakes Entomologist*. 42: 1-7.
2. Jendek, E. & Grebennikov, V., 2009: *Agrilus sulcicollis* (Coleoptera: Buprestidae) a new alien species in North America. *Canadian Entomologist*, 141: 236-245.
3. PRISM. 2011. Parameter-elevation Regressions on Independent Slopes Model. <http://www.prism.oregonstate.edu/>.

