1. Record Nr. UNINA9910711379503321 Autore Johnsson Erik L Titolo Effects of wind speed and angle on fire spread along privacy fences // Erik L. Johnsson; Alexander Maranghides Pubbl/distr/stampa Gaithersburg, MD: .: U.S. Dept. of Commerce, National Institute of Standards and Technology, , 2016 Descrizione fisica 1 online resource (36 pages): illustrations (color) Collana NIST technical note:: 1894 Altri autori (Persone) JohnssonErik L MaranghidesAlexander Soggetti Fire management **Fires** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Contributed record: Metadata reviewed, not verified. Some fields Note generali updated by batch processes. July 2016. Title from PDF title page (viewed July 28, 2016). Nota di bibliografia Includes bibliographical references. Sommario/riassunto A series of experiments was conducted to examine fire spread along fences subjected to wind at various speeds and angles. Specifically, sections of western redcedar, California redwood, or vinyl privacy

fences subjected to wind at various speeds and angles. Specifically, sections of western redcedar, California redwood, or vinyl privacy fences were ignited with a burner. Wind fields of 9 m/s, 13.5 m/s, or 18 m/s aligned with, perpendicular to, or at a 45 angle to the fences were applied during the experiments. To simulate fine fuels typically present in real installations, dried shredded hardwood mulch beds were placed under most of the fence sections. Also, some fence sections were coated with fence preservative to assess its effect on fire spread. Pans of mulch were downwind targets for firebrands produced by the burning fence and mulch bed. At all wind speeds tested, a mulch bed was required for flames to spread. Fastest flame spread was achieved with the fence aligned with the wind field. During most experiments, the burning mulch and fences produced firebrands which ignited spot fires in the mulch targets. These experiments demonstrated that ignited wood fence structures can be rapid conduits for fire along them

and potentially spread fire to attached or adjacent structures. Additionally, it was found that burning fences can produce spot fires from their own firebrand generation. This study of fence fire spread is part of a series designed to better inform standards and codes regarding placement of landscape features around homes at risk of exposure to wildland-urban interface fires.