

THE INVASIVE SPECIES CANNONBALL RUN: A CASE STUDY OF FIREWOOD MOVEMENT TO THE NEW HAMPSHIRE MOTOR SPEEDWAY

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ABSTRACT

Firewood transportation has been identified as a significant vector for dispersing invasive forest insects, such as emerald ash borer (EAB) and Asian longhorned beetle (ALB), much greater distances than they could disperse through natural spread. Several factors exacerbate the risk of moving pests in firewood compared to other wood products. For instance, minimal processing and incremental burning increase the likelihood of firewood harboring live insects which may emerge over time to initiate new infestations. Seasoning firewood may reduce the risk in some cases, but is not effective against certain life stages of wood-boring insects. The firewood movement pathway includes wood harvested for both commercial and recreational purposes, which makes it a challenge to effectively regulate. While commercial firewood enterprises can be identified and targeted for education on how to safely move their product, people moving firewood for camping and recreation are poorly reached through regulatory and outreach efforts.

In July 2011, New Hampshire implemented an out-of-state firewood quarantine, generally prohibiting the importation of any tree material intended for use as fuel for fires, to reduce the risks to its forest resources through firewood movement. The New Hampshire Motor Speedway (NHMS) is a popular camping and recreational destination for people from across North America, making it a prime candidate for firewood outreach activities. Moreover, NHMS hosts the two largest camping activities in the state – the days leading up to the July and September NASCAR races – with approximately 75% of its 5,000 campsites occupied by out-of-state race fans. In cooperation with other state and federal partners and NHMS, New Hampshire's Forest Rangers coordinated outreach to NASCAR fans regarding the risks of moving out-of-state firewood. Outreach has included messaging on the NHMS website, displays at NHMS fan days, brochures in mailings and grab bags, and surveys of fans on their firewood transportation habits.

Firewood quarantine enforcement activities at NHMS were developed and implemented prior to the two NASCAR races in 2013 and before the July race in 2014. Enforcement activities were conducted from 9 a.m. to 10 p.m. Wed.-Fri. preceding each race, when most campers arrive. The NHMS provided space at the entrance so NH Forest Rangers could identify violators and issue notices of violation and summonses upon entry. Cooperating state and federal partners assisted the Rangers in confiscation of firewood, documentation of violations and, most importantly, providing outreach to violators about invasive pests of concern and the risks associated with moving firewood long distances. Confiscated firewood was examined and burned at a nearby transfer station to mitigate risk. Vouchers for local heat-treated firewood were provided as available.

The firewood quarantine enforcement at NHMS resulted in 225 confiscations of out-of-state firewood over 9 days. Confiscated firewood included both green and seasoned wood, with volumes ranging from only a few sticks to full truckloads per violation. Most intercepted firewood (80%) originated in neighboring northeastern states and was transported 49 to 200 miles to NHMS (primarily from Maine, Massachusetts and Vermont). As expected, the number of firewood confiscations from out-of-state decreased with increasing distance from NHMS, with 12% being transported 201-300 mi, 6% transported 301-400 mi, and 2% transported 401-700 mi. This reduction in confiscations with distance may be due to the geographic draw of NHMS rather than to a change in the willingness to transport firewood based on distance. For instance, transcontinental firewood movement from as far as Florida, California and Washington were also observed. Additionally, confiscated firewood originating from the Canadian provinces of Quebec and Prince Edward Island was also found during this enforcement activity in spite of Customs and Border Protection inspections. No firewood originating from known ALB-infested areas was intercepted, although 2% of confiscated firewood originated from towns adjacent to ALB quarantine areas in Massachusetts and New York. Fifteen percent of confiscated firewood originated in areas with known EAB infestations.

The targeted firewood quarantine enforcement activities conducted at NHMS are a model of an effective outreach partnership between private industry and state and federal government. These enforcement activities would not have been possible without the support and cooperation of NHMS and results have provided resource managers and policymakers considerable information on the prevalence of transportation of recreational firewood into New Hampshire. Ongoing and continued outreach efforts about the risks to forests posed by the transportation of firewood are necessary to effect long-term change in the habits of attendees at large recreational camping events. Although expensive, providing firewood vouchers lessens the inconvenience associated with confiscation. Future firewood quarantine enforcement and outreach activities at large recreational events should consider including parallel enforcement at private campgrounds in proximity to the event, conducting additional outreach throughout the event grounds rather than solely on the entry road, and collaborating with local firewood vendors so out-of-state attendees may be readily aware of locally-sourced and affordable firewood at or near the event.