



Toms River Fire Department

Bulletin Number
10-01

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1/4/10

Training Bulletin

Title: Wind Driven Fire Scenario

Purpose: Educate and inform fire officers and firefighters on current developments with regards to the National Institute of Science and Technology (NIST) recommendations on wind driven fire scenarios.

Definition: A wind driven fire scenario is a fire scene where a sustained wind condition of approximately 20 MPH or greater exists. The area of fire origin is on the windward side of the structure, usually on the second floor or higher. The condition is created by the loss of a window to the fire room and the fire room is directly open to the constant inward flow of wind.

History: NIST in conjunction with the Chicago Fire Department and the FDNY have done significant testing on wind driven fires including live fire training at Governors Island NY along with re-visiting past fires. Many fires that were re-evaluated based of fire conditions and observations were deemed to be wind driven.

Recommendations: Testing and past fire experience has found that attacking a wind driven fire head on in an offensive attack is a poor choice from a risk management view point. The constant wind will cause blow torch conditions inside of a structure. If firefighters are between the fire and a ventilation opening their lives are in peril. FDNY has documented several firefighter fatalities. As a result of this testing FDNY has changed tactics for declared wind driven fire scenarios. Firefighters will not start interior offensive operations or ventilation until the windward opening into the fire area is controlled by either a wind control device or a hose line stream.

Recommended Tactics for TRFD: A wind driven fire can be identified by the area of fire origin being exposed to a sustained wind condition [20+MPH] by having the opening protective [window] blow out by fire. If this condition exists then any ventilation opening down wind, even opening the front door for entry, can draw superheated smoke, fire gases and flame to that area. [Shore Blvd. Fire]

Incident commander should direct the first hose line to operate from an exterior position and direct a straight stream into the fire room. This is counterintuitive form or offensive fire attack profile. However, all testing has shown that wind control is imperative. For our operations the best tactic for wind control is to employ an exterior straight stream. This stream should maintain its position and continue to operate until interior hand lines can make entry into the fire area.

Resource: NIST, FDNY, Chicago FD.