



# THE FIRE PROTECTION RESEARCH FOUNDATION

## **Pilot Demonstration of an Impact Evaluation Protocol: NIST NCST Recommendations of the Station Nightclub Fire**

### **Project Summary**

Last Updated: 9 September 2013

### **Background**

Under the authority of the National Construction Safety Team (NCST) Act, the National Institute of Standards and Technology (NIST) establishes a National Construction Safety Team to determine the likely technical cause(s) of building failures. These reports include recommendations, but there has been no systematic method available to evaluate the impact of these recommendations. In a time of tight budgets, decisions about the size and even the continuation of the NCST program require information about impact.

A general protocol for conducting such evaluations cannot be created from scratch and still be detailed enough and validated enough to be useful for NIST's purposes. Therefore, the Fire Protection Research Foundation and the National Fire Protection Association (NFPA) proposes to conduct an evaluation of the impact of recommendations from the NCST report on a single incident, to be documented and conducted in such a way that the specific evaluation will also form the basis for defining a general protocol.

The Station Nightclub Fire occurred on the night of 20 February 2003 in West Warwick, Rhode Island, and resulted in 100 fatalities. [A NIST NCST report was issued in June 2005 and included 10 recommendations.](#) These 10 recommendations are the focus of this pilot study.

For purposes of generating a protocol, the 10 recommendations can be assigned to two groups:

- A. Legislation/Adoption/Enforcement (includes Report Recommendations 1-5 & 7): recommendations for changes in the rules and practices that define local environments and fire department effectiveness; and
- B. Research (includes Report Recommendations 6 & 8-10): recommendations for research on fire-related phenomena and mitigation methods that will lead to recommendations for changes in rules.

Evaluation of Group A recommendations requires examination of local rules and practices. NFPA proposes analysis of local data on local rules and practices as well as analysis of the related changes made to model codes and standards.

Evaluation of Group B recommendations as those recommendations are stated requires examination of published research results and ongoing or planned research programs. A literature review approach is proposed. The Group B recommendations are intended to lead to research that will in turn lead to new rules and practices. The literature review will pay particular attention to the degree of progress toward this ultimate goal.

In some cases, research may already have developed findings relevant to rules and practices, possibly some of the same rules and practices addressed by Group A recommendations. In a separate research task, the Foundation and NFPA will look at the results of its two primary evaluation tasks synergistically to provide an overall impact evaluation and complete the development and demonstration of a comprehensive general impact evaluation protocol. All findings will be summarized in a final report and presented to NIST.

### **Project Objective**

This project addresses the evaluation of the impact of the recommendations from the NCST report on a single incident to be documented and conducted in such a way that the specific evaluation will also form the basis for defining a general protocol. Its implementation will be a tangible step toward a systematic method to evaluate the impact of these recommendations.

The goal of this project is to develop a systematic method to evaluate the impact of NCST recommendations using The Station incident as a pilot study.

### **Project Description**

This project involves the following tasks:

- **Task 1: Identify/Appoint and Administrate Project Technical Panel**
- **Task 2: Analysis of Data Related to Fire Departments/Legislation, Adoption and Enforcement Recommendations** - To address recommendations 1-5 & 7 of the NIST NCST Report on The Station Nightclub Fire, NFPA will analyze privately collected local data related to each addressed recommendation.
- **Task 3: Analysis of Changes to Model Codes and Standards** - Evaluate the extent to which model codes and standards incorporate recommendations 2-5 and 7 and part of recommendation 1 of the NIST NCST Report on The Station Nightclub Fire.
- **Task 4: Literature Review/Research Recommendations** - A literature review approach will be used to address recommendations 6 & 8-10 of the NIST NCST Report on The Station Nightclub Fire.

- **Task 5: Synergistic Review and Integration of Primary Evaluations** - The deliverables from Tasks 2-4 will be reviewed and analyzed. At this point, we anticipate links between Group B recommendations and Group A recommendations.
- **Task 6: Reporting and Dissemination** - The deliverables from tasks #2-4 would represent the final deliverables for this project. In combination, they would represent an evaluation of recommendation impact for the Station Night Club Fire and also provide an implicit general model of an impact evaluation protocol that can be adapted to the recommendation from other NIST NCST reports and similar reports. Interim reports on the progress of each task of the project as well as draft and final reports will be provided. The final report will be made available electronically to the general public through the Foundation website. A presentation on the project will be made at NIST.

### **Implementation**

The research program will be conducted by the Fire Protection Research Foundation and will receive guidance throughout the project by a Project Technical Panel. Funding for this project is provided through NIST. The final report is scheduled to be issued in September 2014.

### **About the Fire Protection Research Foundation**

The [Fire Protection Research Foundation](#) plans, manages, and communicates research on a broad range of fire safety issues in collaboration with scientists and laboratories around the world. The Foundation is an affiliate of NFPA.

### **About the National Fire Protection Association (NFPA)**

NFPA is a worldwide leader in fire, electrical, building, and life safety. The mission of the international nonprofit organization founded in 1896 is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education. NFPA develops more than 300 codes and standards to minimize the possibility and effects of fire and other hazards. All NFPA codes and standards can be viewed at no cost at [www.nfpa.org/freeaccess](http://www.nfpa.org/freeaccess).