



**Fire Flow Water Consumption in Sprinklered and Unsprinklered Buildings:
an Assessment of Community Impacts
Project Summary**

BACKGROUND

Over the past thirty years, selected municipal water authorities have implemented strategies, including stand by fees and other policies, to recover costs for water consumed in fires in sprinklered buildings. Typically these fees are not directly related to sprinkler fire flows but rather are recognition of the fact that these flows are not metered and thus not accounted for in conventional water cost recovery mechanisms. In contrast, water consumption at fires at unsprinklered properties is typically not subject to fees nor metered at the hydrant. With the growing adoption of residential sprinkler ordinances in communities across the country, it is appropriate to assess the relative community impacts of water consumption in sprinklered and unsprinklered properties.

RESEARCH OBJECTIVE

To assess the current prevalence and structure of fire flow fees against the community impact/water usage at sprinklered and unsprinklered properties to develop a consumption-based rationale for community fire fighting resources.

TASKS

- 1) Selection of up to five case study communities that traditionally have had fire flow fees, with a pre-determined mix of building occupancies including residential, commercial and industrial (with input from the Project Technical Panel);
- 2) Assessment of the fire flow fee structure in these communities as well as other nationally available information;
- 3) Selection of a characteristic set of both sprinklered and unsprinklered buildings within each community deemed to be representative of the building stock including residential, commercial and industrial;
- 4) Calculation of fireflow for sprinkler systems in these buildings as well as additional water consumption associated with sprinkler maintenance and testing;
- 5) Review of the literature on water consumption by the fire service in both residential and commercial buildings (including a recent study by the Foundation and other information) to make an assessment of water consumption for unsprinklered buildings in the case study communities;
- 6) Provide a rational basis for the assessment of fire flow fees for sprinklered and unsprinklered buildings in the selected communities.