

**BREAK IN CASE OF EMERGENCY**



BY DANA WILKIE | ILLUSTRATION BY ANASTASIA VASILAKIS

# RISE & FIRE

**A SERIES OF RECENT HIGH-RISE FIRES HAS REIGNITED THE DEBATE ABOUT REQUIRING SPRINKLER SYSTEM RETROFITS AND INSTALLATIONS IN OLDER BUILDINGS. BOARDS IN THESE COMMUNITIES ARE LEARNING THEY'LL HAVE TO FIGHT FIRE WITH FUNDS—LOTS OF FUNDS.**

They can be expensive. They require regular maintenance and inspections. Installing them can be disruptive.

Yet they can save lives and property.



**PUTTING SPRINKLER SYSTEMS** in older high-rise buildings may sound like a no-brainer—particularly given recent fires like those in high-rises in West London and Honolulu—but winning support from owners can be tricky.

Plenty of older condominium associations—built before local or state laws required sprinkler systems in high-rises—have shied away from installing them, launching debates at legislative bodies across the country about whether they should be forced to.

“Retrofitting older multifamily buildings can be costly both in terms of dollars and inconvenience to residents,” says Donna DiMaggio Berger, an attorney with Becker & Poliakoff and a fellow in CAI’s College of Community Association Lawyers (CCAL). “Consider how difficult it is in many buildings to even complete monthly pest control services and then consider the momentous task of retrofitting occupied units with sprinklers and pipes. Installing sprinklers during the construction phase bears no resemblance whatsoever to what that installation looks like in an older, occupied building.”

Those who live in, govern, or manage a condominium or a community of townhomes constructed since 2009 probably already have automatic fire sprinkler systems. Those built earlier, and that lack such systems, sometimes suffer dire consequences.

### TOWERING INFERNOS

A fire at the 27-story Grenfell Tower in West London in June 2017 claimed at least 80 or more lives and caused many injuries. Some called it the most horrific high-rise catastrophe since 9/11.

Fire-related disasters also have occurred recently in a 21-story building in Tehran, Iran, and at Honolulu’s 568-unit Marco Polo Condominium. More than 30 people perished—including several firefighters—last January in Tehran; the Marco Polo fire claimed three lives and injured 16 others in July.

From 2009 to 2013, U.S. firefighters responded to an average of 14,500 high-rise fires annually, according to the National Fire Protection Association’s (NFPA’s) 2016 research document *High-Rise Building Fires*.

NFPA, which defines a high-rise building as “seven stories above grade,” says the risk of deaths per 1,000 fires is lower in high-rise buildings overall than in other types of residential buildings. Fires in high-rise communities also rarely damage rooms other than those in which the fires originate. Only 4 percent of high-rise fires spread to another room, and only 2 percent spread to another floor. Nearly two-thirds of high-rise fires are in apartments or multifamily communities (as opposed to office buildings), and more than three-quarters of high-rise fires start in a kitchen.





**NO SPRINKLERS.** A fire at the 27-story Grenfell Tower in West London (on page at left and below) in June 2017 claimed at least 80 or more lives and caused many injuries. Some called it the most horrific high-rise catastrophe since 9/11.



Yet the cost to retrofit an existing building is substantial—potentially hundreds of thousands of dollars depending on the size of the building. Sprinkler pipes have to be run through every unit and through common areas, and the system has to be tied together using pumps and connections.

“You could be looking anywhere from \$6 to \$8 per square foot,” says Robert Solomon, head of the Building and Life Safety Codes division at the NFPA. “That’s real money. You also have to deal with some displacement of residents while the work is being done.”

Moreover, he adds, some local jurisdictions may consider the retrofitting a capital improvement that increases the value of the building and, hence, raises property taxes.

There are ways to minimize the financial impact. States that require older high-rises to retrofit with sprinklers can assist with low-interest loans. Insurance companies may lower premiums if a sprinkler system is installed. Also, some states have set up funds to help homeowners in multifamily buildings who suffer water damage when state-mandated sprinklers go off, causing mold and other long-term problems.

As for displacing residents, Solomon says that the use of non-metallic materials in sprinkler systems has made installation much easier.

“People are thinking, ‘Oh my God, I’m going to have these iron workers and pipe fitters (in my home),’ but with the non-metallic pipes, it’s a much cleaner product to use for retrofitting,”

he says. “There’s a finite number of designs—maybe one for a studio, another for a one-bedroom, another for a two-bedroom. Once (an installer) knows what the layout is, a lot of these systems can be pre-cut. In many cases, installers can be in and out of a unit within a day. The project might go on for months, but it’s not like people have to be displaced for months.”

### **SYSTEM UPKEEP**

A fire sprinkler system is of no use if it’s not properly maintained and inspected, or if residents tamper with it.

“The sprinkler heads are located within the individual units, which are the obligation of the owner of the unit to maintain, repair, and replace, while the entire system as a whole is building wide, and everyone’s safety relies on the system working,” says Ellen Hirsch de Haan, an attorney with Wetherington Hamilton in Tampa, Fla., a CAI past president, and a CCAL fellow. “More than once, I’ve seen an owner remove a sprinkler head because it was ‘ugly’ or paint over the sprinkler heads within the units, rendering them inoperative. And, I’ve seen a contractor working within a unit knock a sprinkler head off and cause a significant flood in the building as a result.”

The NFPA recommends a yearly inspection of sprinkler heads to ensure they are free from “corrosion, foreign materials, paint, and physical damage.” Maintenance staff, homeowners, or tenants can perform this inspection. If the sprinkler heads are corroded or damaged, they need to be replaced. If the commu-



nity doesn't have a supply of spare sprinkler heads or a fund available to replace damaged heads, it may be a good idea to consider creating one that anticipates these costs.

At least every 10 years, a representative sample of the sprinkler heads across the entire system should be tested, which should include removing some of the heads and sending them to a lab for analysis. The NFPA recommends that 1 percent of the total heads in the system be tested or, if it's a smaller system, at least four. Testing the heads is designed to ensure that they activate properly and supply the appropriate amount of flow.



**UNSCATHED.** Tom Schmidt lives on the 26th floor of the 36-story Marco Polo, a residential high-rise building in Honolulu, where three people died in a fire that broke out in July 2017. Several others, including one firefighter, were injured in the incident; one of the injured died three weeks after the 7-alarm fire, which required 120 firefighters and 15 fire engines. Built in 1971 before sprinkler systems were required for high-rise buildings, the Marco Polo doesn't have a sprinkler system, although the homeowners association got estimates for installing a system after a fire in the building in 2013.

The gauges that measure the pressure in the system should be tested for accuracy at least once every five years. If the pressure gauge is no longer accurate, the sprinkler system may not provide enough pressure to suppress or extinguish a fire.

Alarm devices should be tested quarterly.

The solution inside the pipes should be tested annually for contamination and proper freezing point. Most water-based systems incorporate an antifreeze solution that helps keep the pipes from freezing. And if the sprinkler solution is contaminated and left untreated, the contamination can quickly progress into expensive problems, such as corroded and leaking pipes.

"Any tests of the fire sprinkler system are conducted by private contractors on a periodic basis," de Haan says. "In addition, the fire marshal makes an annual inspection of the condominium buildings. The inspection would include water pressure, pump operation, and spot-checking of sprinkler heads."

When a sprinkler system doesn't work, the first thing investigators will look at is the inspection testing and maintenance records, Solomon says. Sometimes, investigators find a valve got closed off.

"Sometimes it's the main valve that comes into the building or a valve that controls the water supply on each floor," says Solomon. "Maybe there was some maintenance being done, (someone) shut off the supply, drained the system ... and forgot to reopen that valve."

## A 'MIXED BAG' OF LAWS

Many U.S. states and municipalities don't require sprinkler systems in some older high-rise buildings, and *The Chicago Tribune* recently cited a "mixed bag" of regulations in several cities. New York, Dallas, and Chicago, for instance, don't require sprinkler systems to be installed in older buildings unless the retrofit is part of another major renovation.

Not so in Florida, where Gov. Rick Scott recently signed a law that will require older communities across the state to install sprinkler systems, no matter what. It's a costly mandate, particularly for communities that lack reserves.

Florida's older high-rise condominiums will have just years to retrofit their fire sprinkler systems, and the high costs for such upgrades likely will put a severe strain on unit owners, including many who are on fixed incomes.

Under state law, condominiums taller than 75 feet and built before 1994 must be retrofitted with sprinklers or "engineered life-safety systems" by the end of 2019. In late June, Scott vetoed HB 653, which would have extended that deadline until 2022 and allowed condominium residents, with a two-thirds vote, to opt out of the retrofits. With his veto, Scott cited the Grenfell Tower fire in London in June that killed dozens of people.

Scott's veto meant that many associations could have to levy special assessments to fund upgrades in common areas.

At least 5,600 condominiums in the state could be affected. Associations of all sizes that choose to pursue the retrofit were supposed to apply for a building permit for the project by Dec. 31, 2017, and provide documentation stating that the work will be done by Dec. 31, 2019.

Because many people in Florida are on limited or fixed incomes, this expenditure may be far outside of their budgets. If several people can't or don't pay, that could have a significant negative impact on the association's operations. Which means the remaining owners will be required to make up the deficit for any unpaid assessments.

But "it's not like the state legislature said, 'We want these buildings retrofitted by next week,'" Solomon says.

# “WE’RE PUTTING A PRETTY VULNERABLE POPULATION IN THESE HIGH-RISES WHO TEND TO MOVE A LITTLE SLOWER, REACT A LITTLE SLOWER, AND PROBABLY CAN’T DESCEND 20 FLIGHTS OF STAIRS IF THERE’S A FIRE NOT BEING CONTROLLED BY A SPRINKLER SYSTEM.”

“They initially gave (buildings) an eight- or 10-year period, and that’s very generous and consistent with the requirements in the NFPA code. Some facilities went ahead and did it early on. Others decided to fight it. And now, all of a sudden, that window is closing, and you have all these buildings not in compliance.”

DiMaggio Berger, however, says that the biggest problem with Florida’s retrofitting law is that “there is neither clarity nor uniformity as it pertains to the components of an Engineered Life Safety System (ELSS).”

“Currently, an ELSS in Jacksonville can look quite different than one in Naples or Ft. Lauderdale. Given that the specific components of an ELSS have never been confirmed, it is left up to the whims of the local authority having jurisdiction to decide which components are necessary for multifamily buildings in their area. Experience has taught that fire marshals with departments that lack resources are adding more components onto their ELSS wish list to make up for their deficiencies, so it becomes a roll of the dice for many communities in terms of geographic disadvantage.”

In 2017, DiMaggio Berger’s firm sponsored a state bill that might have provided such clarity. The bill passed the Florida

Legislature with just one dissenting vote, but Scott vetoed it, again citing the Grenfell Tower fire in London.

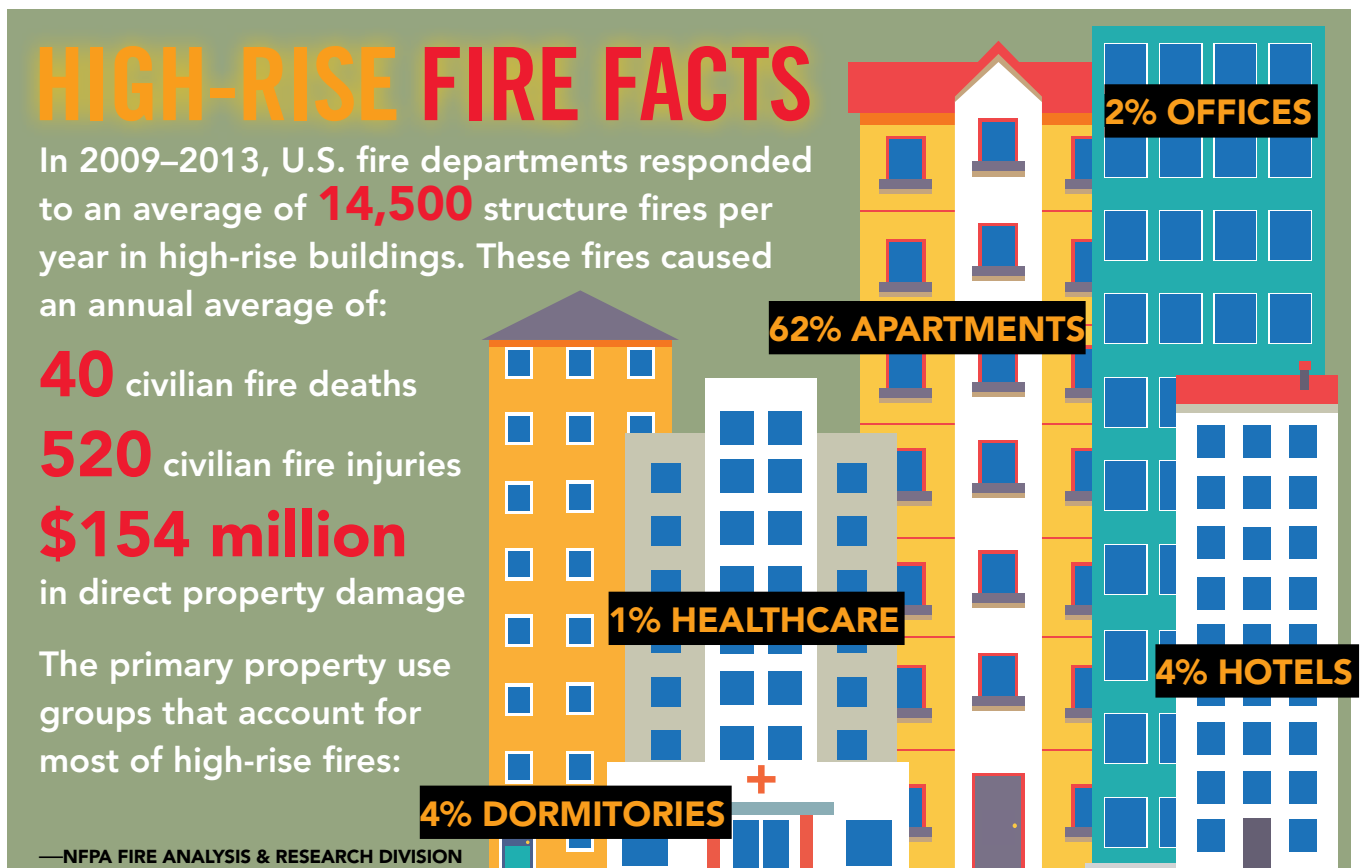
“The governor’s actions were particularly upsetting because that fire took place in a different country, with entirely different building codes and bore no relation whatsoever to the situation in our state,” DiMaggio Berger says.

Countered Solomon: “The London fire—that was an unacceptable loss. That’s not a third-world country. It’s similar to the U.S., and I think the governor took a look at (it) and said, ‘I don’t want to see that happening in Florida.’”

Further, he says, the people living in many older Florida high-rises are elderly.

“We’re putting a pretty vulnerable population in these high-rises who tend to move a little slower, react a little slower, and probably can’t descend 20 flights of stairs if there’s a fire not being controlled by a sprinkler system.”

DiMaggio Berger’s firm plans to try again this year to, at a minimum, prevent the application of retrofitting requirements from violating the statutory rights of owners who have previously opted out of sprinkler requirements.







## HAWAII HAPPENINGS

A debate similar to that in Florida erupted in Hawaii after the July 2017 fire at the 36-story Marco Polo Condominium.

The five-alarm fire left as many as 50 of the community's 568 units uninhabitable; roughly 200 suffered at least some damage. It was the fourth fire to occur in the building since 2001.

Marco Polo was built in 1971, four years before laws mandated that fire-sprinkler systems be installed. A 2005 legislative effort to require mandatory retrofitting of older buildings on the island failed. City and state lawmakers have renewed the debate. In 2013, the community's board received a \$4.5 million estimate for sprinkler installation.

"The debate is heated," says Jane Sugimura, president of the Hawaii Council of Community Associations. "The city is insisting that a mandatory sprinkler law is necessary for public safety, and the condo/apartment unit owners claim that retrofitting will be too expensive and that they should be able to have the flexibility to decide what safety measures they want to implement instead of fire sprinklers."

Local fire officials indicate that while they don't support mandatory fire sprinklers on all high-rise buildings, they would insist on a partial retrofitting, such as putting sprinklers in the hallways and in common areas.

The city has identified 361 high-rise (75 feet and higher) residential buildings. Under an evaluation process, all but about 52 buildings would be exempt from the mandatory fire-sprinkler requirement because buildings have no interior corridors (i.e., the units open into an exterior corridor that leads to an exit stairwell) or they are nine stories or fewer in height.

Sugimura was a member of the 2005 Residential Fire Safety Advisory Committee set up by the Honolulu City Council to address the issue of mandatory retroactive fire sprinklers in high-rise buildings. She also was a member of the 2017 committee established by the city council after the Marco Polo fire.

The 2005 group determined that the cost for retrofitting ranged from \$5,000–\$15,000 per unit. The 2017 committee indicated that existing high-rises would have to have at a minimum a 10-by-10 foot room to house the pumping equipment to service the fire sprinklers.

"One member of the 2017 committee noted that since many existing buildings are maxed out, this may require a variance from the city to add the new 10-by-10 foot room," Sugimura says. "The city council is considering loans and grants to residents on fixed incomes and incentives such as waiving departmental fees for permits and providing real property tax credits." **CG**

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