

Selected Published Incidents Involving Marinas

**One-Stop Data Shop
Fire Analysis and Research Division
National Fire Protection Association**

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This report includes articles from NFPA publications about fires involving marinas. Included are short articles from the “Firewatch” or “Bi-monthly” columns in *NFPA Journal* or its predecessor *Fire Journal* and incidents from either the large-loss fires report or catastrophic fires report. If available, investigation reports or NFPA Alert Bulletins are included and provide detailed information about the fires.

It is important to remember that this is anecdotal information. Anecdotes show what can happen; they are not a source to learn about what typically occurs.

NFPA’s Fire Incident Data Organization (FIDO) identifies significant fires through a clipping service, the Internet and other sources. Additional information is obtained from the fire service and federal and state agencies. FIDO is the source for articles published in the “Firewatch” column of the *NFPA Journal* and many of the articles in this report.

For more information about the National Fire Protection Association, visit www.nfpa.org or call 617-770-3000. To learn more about the One-Stop Data Shop go to www.nfpa.org/osds or call 617-984-7443.

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Marina, 75 Yachts Destroyed, \$2 Million Loss, Maryland

A fire of undetermined cause destroyed 75 yachts berthed at a marina. Of combustible construction, the pier involved was 396 feet long by 36 feet wide. A wood-frame shed with a plywood roof deck (20 feet above the pier) covered approximately two-thirds of the pier as a weather station for the boats tied up at the pier.

A watchman discovered the fire burning on an unoccupied 40-foot motor vessel of wood construction, and with other facility occupants he attempted to control it with two five-pound portable dry chemical extinguishers. The fire quickly spread to the combustible pier. The vessel first involved was located under the shed portion and the fire spread under the roof deck.

The Fire Department was notified, but by the time the first due company arrived from a station only a quarter of a mile from the scene, the pier and vessels under the shed were fully involved. Eleven engines and 60 fire fighters fought the fire. Water was drafted from a river to supply two heavy streams and eight 1½-inch hand lines. The maximum fire flow used was approximately 2,500 gpm. The pier and 75 vessels, including those berthed at the pier of origin and at an adjacent exposed pier, were heavily damaged. The loss to marina facilities was estimated at \$100,000. The loss to the vessels involved will exceed \$2 million.

Delay in reporting the fire was a contributing factor in this loss, as was the unprotected combustible shed covering the pier, which caused the rapid horizontal fire spread.

Fire Analysis and Research, 1971, "Bimonthly Fire Record" *Fire Journal*, November, 49.

Boat and Tobacco Storage, Georgia

Two roadside fire hydrants were the only fire protection provided for this relatively isolated 200-by-350-foot one-story metal clad wood-frame building. At the time of the fire the building contained 141 new glass fiber-reinforced plastic boats, ranging from 14 to 23 feet long. Fifty of the boats had inboard motors. Fourteen were on trailers. There were also two pickup trucks, one tractor-trailer truck, and two customer-owned boats awaiting repairs in the building. In addition, there were stored tobacco, tobacco conveyers, and other *tobacco-handling* equipment, an enclosed office, and customer supplies. Near the customer supply area there was a small boat repair area in which acetone, resin, and catalyst were stored.

Just after midnight a neighbor saw the building on fire and phoned in an alarm. Fire fighters found the building completely engulfed in flames and beyond salvage, so they directed their hose streams on a mobile home and three truck trailers loaded with 18 boats some 75 feet west of the burning building. The fire had been set by four young men who poured a flammable liquid inside the building and ignited it to divert attention while they were breaking into a drugstore to steal drugs. The drugstore, however, was protected with a burglar alarm system that alerted police. Three of the men were captured at the drugstore and the fourth was captured the following day. The property damage was estimated at \$300,000.

Fire Analysis and Research, 1973, "Bimonthly Fire Record" *Fire Journal*, May, 59.

Marina, New Jersey

A fire of undetermined origin destroyed this marina and most of the boats that were stored there. The loss has been established as \$7,165,000 for the building and contents. A total of 11 pieces of fire apparatus and 48 men fought this fire for 2 ½ hours before it was officially declared extinguished.

“1974 Large-Loss Fires in the United States”, 1975, *Fire Journal*, September, 18.

Marina, Charcoal Briquettes Ignite Stored Boat, Michigan

This undivided boat-storage shed of noncombustible steel construction measured 125 feet by 100 feet. It was twenty-eight feet high. Housed in the structure were over 80 boats, placed three high on wood storage racks..Most of the boats were of fiberglass construction and contained large amounts of gasoline in their fuel tanks.

Shortly before midnight a police patrol discovered the fire, which was already burning fiercely. Arriving fire fighters found the building fully involved. They were able to keep the fire from spreading to adjacent buildings although three boats stored outside and an adjacent office/showroom received minor damage. The building collapsed approximately one hour after the arrival of the Fire Department. Its contents were completely destroyed.

The cause of fire is believed to have been live coals in a charcoal stove on one of the boats. As the boat was being moved from the water to the storage shed earlier in the evening, the stove was upset and the coals had spilled out.

Fire Analysis and Research, 1976, “Bimonthly Fire Record” *Fire Journal*, January, 35.

Boat Storage Facility, Boats Destroyed in Arson Fire, Ohio

Twenty-eight boats and a motorhome stored in an unprotected steel building were damaged when an alleged arsonist set up at least 12 separate "plants" throughout the structure. The material ignited was 'alcohol (stove fuel that was stored in the building), and in some cases the cloth wicks burned out before the fuel became hot enough to vaporize. Only six of the plants ignited.

The fire department received a telephoned alarm from a passerby at 9:27 pm, but their arrival was delayed as a result of confusion over the location of the fire, which was off a limited access highway and difficult to see.

Entry and ventilation of the 100-foot-by-144-foot, 20-foot-high building was difficult because of the few wall openings. Three doors and an overhead steel door were all locked when fire fighters arrived. Entry was finally made through the overhead door, and the owner arrived and unlocked one of the other doors. Ventilation was accomplished by removing two 4-foot-by-6-foot corrugated fiberglass panels at the eaves of the building.

Smoke from the fires was irritating and toxic because alcohol, plastics and resins were involved. One fire fighter whose breathing apparatus malfunctioned had to be treated for asphyxia and smoke inhalation.

Approximately half of the boats were severely damaged and the others received varying degrees of heat and smoke damage. The northern end of the building was insulated and separated from the southern end by a fire-resistant curtain. Both the curtain and the insulation were destroyed by the fire, which caused an estimated \$750,000 damage to the building and its contents.

Fire Analysis and Research, 1982, "Bimonthly Fire Record" *Fire Journal*, January, 15.

Marina, Fireworks Cause Boat Fire, Michigan

Three boats were destroyed and six others were damaged when fire erupted aboard a vessel at this marina complex.

A witness to the fire said that he saw what he thought was a bottle rocket land on a canvas boat cover at about 1:11 am and that he watched the cover ignite moments later. The fire then spread to a succession of boats, igniting the fiberglass of each in turn. Another witness evidently tried to swim to one of the burning boats with a portable fire extinguisher, but he was forced back by the fire's intensity.

By the time the fire department arrived at 1:15 am, three boats were fully involved. Firefighters had to stretch hose lines 300 feet from shore out onto the pier in order to reach the boats, but they had the fire under control within 30 minutes.

Three fiberglass boats between 24 and 27 feet long were destroyed, and the pier and six other boats were damaged. The loss amounted to \$84,850. One firefighter was taken to a local hospital and treated for smoke inhalation.

Neil Courtney, 1989, "Fire Record" *Fire Journal*, July/August, 19.

Boat Sales, Twenty Jet Skis Lost in Accidental Fire, New Hampshire (Might find this one interesting)

Shortly after workmen at this boat sales facility finished covering 20 recently delivered jet skis with plastic shrink wrap, a fire broke out and consumed the entire lot of them.

The jet skis, stored in a single pile in crates with cardboard covers, had **been** wrapped in a plastic membrane. Workmen had applied heat from a torch to shrink the membrane into a tight wrap to protect the jet skis from the weather. Having completed their task, the men broke for lunch.

A passerby spotted the pile burning shortly afterward and drove to the facility to notify employees, who called the fire department at 12:30 pm. The entire shipment of jet skis was lost, although firefighters did prevent the blaze from spreading to nearby exposures.

Fire investigators believe that the torch the workmen used to shrink the plastic wrap inadvertently ignited part of the cardboard covering. After smoldering undetected, the fire burst into flames and grew unnoticed as the workmen ate their lunch.

Neil Courtney, 1990, "Fire Record" *Fire Journal*, January/February, 15.

Boat Storage Three Buildings Lost in \$1.5 Million Fire, Canada

A building fire at this yacht club on a small island in a Great Lakes harbor overwhelmed the resources of the island's single-engine fire company.

The fire erupted in a 20-foot-square, wood-frame shed that housed an air compressor which supplied piped air to a "bubbling system" installed around the docks and boats in wet storage to prevent the lake water from freezing and damaging them. The compressor apparently overheated and ignited nearby combustible materials.

Since the shed had no on-site detection or sprinkler protection, the fire was first brought to the attention of the police at 4:55 am when someone across the harbor noticed that the building was burning. The police dispatcher notified the duty watchman at the yacht club, who confirmed a working fire.

The island fire company's lone piece of apparatus was assisted at the scene by a fireboat and associated floating pumps, both designed to support 2 1/2-inch hand lines that stretched across the open water from the boat and pumps to the island. Later in the blaze, a fire department on the mainland also assisted, sending three engines, a ladder, a rescue squad, and a chief officer's command vehicle, along with a complement of manpower, to the island aboard a ferry.

The fire damaged or destroyed three buildings. The loss was placed at about \$1.5 million, primarily due to the loss of 10 boat engines and 60 masts. There were no injuries.

Neil Courtney, 1990, "Fire Record" *Fire Journal*, March/April, 22.

Boat Storage Yard, Victims Overcome by Fire, Massachusetts

While on routine patrol, a police officer spotted smoke coming from a 22-foot fiberglass cabin cruiser mounted on a trailer in this boat storage yard. The smoke from the boat's cabin was so heavy that he could not get in to investigate.

The officer radioed his dispatcher at 4:38 am and asked for the fire department. When firefighters arrived, they advanced a small hoseline and entered the cabin, where they easily extinguished a small fire. They also discovered a body, which they pulled to the rear deck of the boat to try to resuscitate. Several firefighters reentered the cabin and found a second body, which they also brought up on deck.

The two victims, both 16-year-old boys, had apparently sought refuge for the night inside the boat. They died of asphyxia. Officials believe that the boys may have been using drugs, which might have impaired their judgment and prevented their escape.

The fire was the result of careless disposal of smoking materials, which ignited a cardboard carton. Flames then spread to several boat cushions. The tightly sealed cabin was believed to have produced low-oxygen burning conditions. Damage to the boat was estimated at \$15,000.

Neil Courtney, 1990, "Fire Record" *Fire Journal*, July/August, 22.

Engine Room Fire Destroys Boats, Docks at Marina, Connecticut

A fire destroyed two boats, damaged three others, and damaged a wood dock when a heat lamp ignited the interior wood lining of the engine room of a boat being used as a moored winter residence. The boats were in wet storage at a marina.

The fire began on a 27-yearold, 42-foot wood cabin cruiser that was occupied by a man, 61, and a woman, 53. At 2:29 a.m., the local fire department received a 911 call from the boat's occupants, who had been awakened by the smell of smoke. The boat was not equipped with a smoke detector.

The occupants had discovered a fire in the engine room and activated the manually operated, fixed, carbon-dioxide extinguishing system that protected this area. However, the fire was already too large and the system was ineffective. The principal effect of the equipment on this type of fire was to drive flames and smoke into other areas of the boat.

As they fled the burning boat, the man and woman attempted to put out the fire using extinguishers that were mounted on the dock, but the fire was beyond their control. They suffered from burns and smoke inhalation.

Fifteen-knot winds, the barrier posed by the winter cover on the first involved boat, and the extra time needed to establish fireground operations for a fire at an island marina contributed to the spread of the fire.

The loss to all properties was estimated at \$750,000.

Neil Courtney, 1991, "Firewatch" *NFPA Journal*, November/December, 26.

Pier Fire Spreads to 15 Boats, Kentucky

When firefighters arrived at a dockyard fire, they found 15 boats partially or fully involved in flames. Crews managed to extinguish the blaze using water, foam, and resources from seven departments, but not before it caused an estimated \$2 million in damage.

The marina provided winter storage for pleasure boats. The boats were stored in individual slips covered by an aluminum roof, which collapsed during the fire, hindering firefighting efforts. Each slip was 35 feet (11 meters) long. The facility had no fire or smoke detection equipment or sprinklers.

A person across the waterway saw the fire and called the fire department at 11:57 p.m. Fiberglass combustible construction and hazardous contents, including stored propane and gasoline, fueled the fire, allowing flames to spread quickly from boat to boat. Although the roof collapse prevented

firefighters' hose streams from reaching the seat of the fire, crews were able to control it by attacking the blaze from both ends of the pier using foam and water tanked to the scene.

The structure was a total loss. Combined damage to the structure and boats was estimated at \$2 million. There were no injuries.

Kenneth J. Tremblay, 2002, "Firewatch", *NFPA Journal*, January/February, 21-22.

Boat Fire Spreads to Other Boats in Marina, Washington

A fire that started by a portable electric heater on a boat docked in a covered marina spread to several other boats, fanned by high winds that impeded fire ground operations.

The boats were moored at a wooden dock that had a wood frame and a metal roof overhang. The boat on which the fire started was at the end of a dock, several slips of which were occupied by other boats. The marina had no detection or sprinkler system and was closed for the night when the fire broke out.

Although a portable heater was identified as the heat source for the unintentional fire, the exact cause and the ignition sequence was unknown. The flames spread to the boat's interior and from there, to the roof overhang and several other boats before firefighters arrived.

Using several hose lines, firefighters were able to protect a nearby garage and restaurant, despite winds of 20 to 30 miles (32 to 48 kilometers). Damage to the building and its contents are estimated at \$915,000.

Kenneth J. Tremblay, 2002, "Firewatch", *NFPA Journal*, May/June, 34, 36.

Boat Fire Spreads through Large Marina, Washington

Fanned by strong winds, flames from a burning houseboat spread to 10 other boats moored in a large marina around 7:30 p.m. As the fire grew, it melted mooring lines, sending burning boats drifting into the waterway. Dozens of pleasure boats in Washington caught fire when one burning boat drifted from its pier to a nearby pier housing 40 boats.

The marina had approximately 152 slips in three docks that extended 240 feet (73 meters) to 460 feet (140 meters) into the waterway. Each dock provided a variety of recreational and live-aboard vessels with utilities and covered berths. The marina had no fire detection or suppression equipment.

When investigators found a downward burn pattern through the carpet and decking beneath a damaged power strip on the 32-foot (10-meter) houseboat, they determined that power strip had started the fire.

Damage to the boats and marina is estimated at nearly \$7 million. There were no injuries.

Kenneth J. Tremblay, 2003, "Firewatch", *NFPA Journal*, May/June, 20.