



# National Transportation Safety Board

## Marine Accident Brief

### Fire at Jackson County Park Marina

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<b>Accident type</b>	Fire/Explosion	<b>No.</b>	DCA20FM013
<b>Vessel/Marina name</b>	<i>Dixie Delight</i> /Jackson County Park Marina, Dock B		
<b>Location</b>	Lake Guntersville/Tennessee River, Scottsboro, Alabama 34°38.24' N, 086°00.82' W		
<b>Date</b>	January 27, 2020		
<b>Time</b>	0035 central standard time (CST) (coordinated universal time - 6 hours)		
<b>Injuries</b>	8 deaths, 1 serious injury		
<b>Property damage</b>	>\$500,000 est.		
<b>Environmental damage</b>	An estimated 4,000 gallons of fuel and lube oil were released and consumed during the fire.		
<b>Weather</b>	Visibility 3 miles, overcast, calm; air temperature 41°F, water temperature 41°F; morning twilight 0619, sunrise 0645, evening twilight 1734, evening sunset 1707		
<b>Waterway information</b>	A dam on the Tennessee River at mile 349 creates 75-mile-long Lake Guntersville in northern Alabama. The water depth reported around the marina was 8-10 feet.		

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On January 27, 2020, about 0035 local time, fire broke out aboard the *Dixie Delight*, a 43-foot liveaboard houseboat, tied to Dock B at Jackson County Park Marina in Scottsboro, Alabama. The owner of the vessel attempted to extinguish the fire and push the burning vessel away from the dock, but the blaze engulfed the *Dixie Delight* and then spread to neighboring vessels and the wood-framed covered dock. The fire trapped seventeen people on the dock. In the process of attempting to escape, eight people died. An estimated 4,000 gallons of fuel and lube oil were released, with the majority consumed during the fire. The value of Dock B and the 35 vessels destroyed was estimated at more than \$500,000.

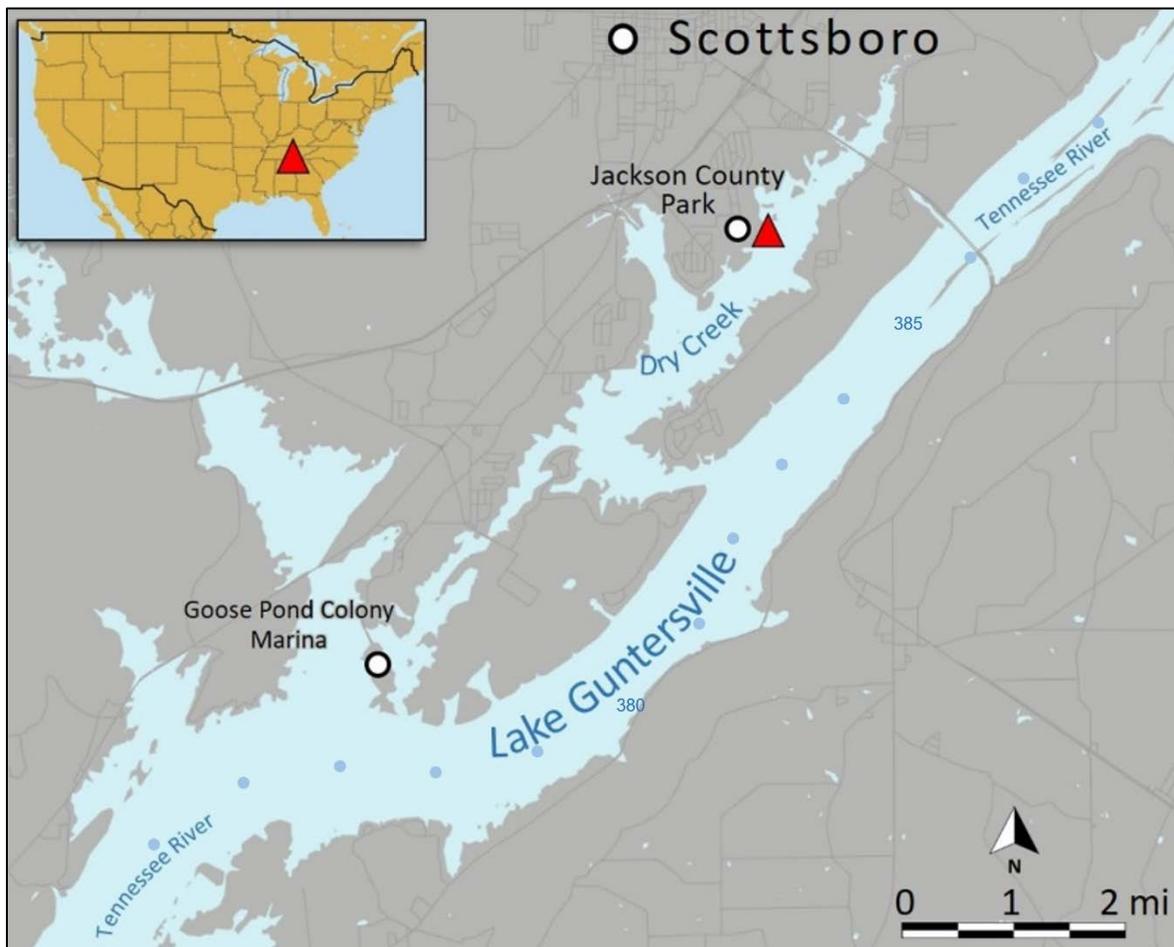


Jackson County Park Marina Dock B (Source: Google Maps). An inset of the *Dixie Delight* in the upper left (Source: A. Utech, via Facebook).

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### Background

Jackson County Park is located in Scottsboro, Alabama, in an area on the western shore of Lake Guntersville known as Dry Creek. Lake Guntersville was created in the late 1930s when the Tennessee River was dammed at mile 349. The lake stretches 75 miles between the cities of Guntersville and Bridgeport, Alabama. The park consisted of rental cabins, recreational vehicle hook ups, camp sites, a playground, and a marina. The marina had a number of waterfront structures and docks. Two of the docks were covered and catered to recreational boats, both runabouts and houseboats, by providing electrical power, fresh water, and waste disposal services. Dock B was made up of 2 uncovered and 36 covered slips. The dock extended into the lake about 420 feet, and, except for the metal roof, was entirely constructed of wood. The covered section of the dock began about 90 feet from shore, and was approximately 330 feet long by 100 feet wide. Jackson County municipality owned the park, including the marina, and employed staff to maintain and manage its daily operations.



**Location of Jackson County Park Marina fire on Lake Guntersville, as indicated by red triangle. (Background source: Google Maps)**

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Jackson County Park Map. (Source: Jackson County Park)

The *Dixie Delight* was a fiberglass, 43-foot recreational liveaboard houseboat built in 1974. The owner had never owned a houseboat before and had bought the vessel in October 2019. The previous owner purchased the boat in January 2019 from Jackson County Park, which had taken possession of the vessel due to unpaid slip fees.

The vessel interior was accessed via a single starboard-side door that led into the helm station. The station consisted of the vessel's helm, throttle controls, navigational equipment, and a small seating area. A short set of removable stairs led aft from the helm down to a small kitchenette. The vessel's electrical panel was mounted to the forward bulkhead of a small closet accessed by removing the stairs. The owner's stateroom, one of two bedrooms, was directly aft of the kitchenette. When operational, the twin screw vessel was powered by two 225 horsepower inboard Mercruiser engines.

An onboard Onan electric generator supplied the vessel with electrical power while



*Dixie Delight* tied to slip #36 at Jackson County Park Marina prior to the fire. (Source: A. Utech, via Facebook)

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underway. The vessel also had a shore power connection to supply electrical power at the dock. Following the fire, the owner told investigators that the *Dixie Delight* was connected to shore power and that the electrical load consisted of a small refrigerator, an electric blanket, an operating television, a charging cell phone, and a small portable electric heater. He also said that he had been operating this equipment onboard his vessel in the months prior to the fire, and he never had a problem with tripping electrical breakers or other electrical troubles.

### Accident Events

About 0035 on January 27, the owner of the *Dixie Delight*, sleeping onboard the vessel, was awakened by a “popping” sound, and discovered the interior of his vessel filled with smoke. Unable to locate the source of the smoke, he opened the entry door to allow some smoke to clear and exited the vessel onto the dock. He notified a resident of a boat across the dock that his boat was on fire and then returned inside and attempted to locate the fire. The owner later told investigators that upon returning to his boat, he opened the closet located on the starboard side of the stairwell leading to the kitchenette, and saw flames coming from the forward bulkhead, in the same area as the vessel’s electrical panel. He discharged the contents of his vessel’s dry chemical fire extinguisher into the flames. He then exited the vessel and requested a fire extinguisher from the same neighbor he had spoken to moments before. The neighbor gave him an extinguisher and then evacuated the dock to shore with his dog. The *Dixie Delight* owner returned to his vessel, only to see the fire had grown. He discharged the contents of the second fire extinguisher into the same area with little effect.



Interior of the *Dixie Delight* prior to the fire, as viewed from the aft bedroom looking forward. The red arrow indicates the location of utility closet adjacent to vessel’s electrical panel. (Source: A. Utech, via Facebook)

At 0038, the fire aboard the *Dixie Delight* was still growing, and the owner called 911 from his mobile phone for assistance. The operator dispatched the fire department and police personnel to the scene. About this time, the *Dixie Delight* owner woke the owner of another houseboat several slips away from his. The two men began untying mooring ropes and disconnecting the potable water hose and electrical cables from the *Dixie Delight* in an effort to push the burning boat away from the dock. However, the owner struggled with disconnecting the potable water hose, and the fire quickly grew, preventing them from completing the task.

The fire continued to rapidly grow, first engulfing the *Dixie Delight*, then jumping to surrounding vessels. The *Dixie Delight* was docked in the first covered slip on Dock B, so when the fire spread to the wooden-frame dock, it blocked the exit from Dock B to the shore. The remaining 17 occupants of the boats at Dock B gathered at the end of the dock away from the fire. (Not all of the approximately 35 boats were occupied at the time of the fire.) As the fire continued to spread along the dock and its vessels, the people on the dock attempted to find an alternate means of escape. Several people considered attempting to fight the fire with portable fire

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extinguishers located on the dock, but were quickly deterred. One individual stated that “the fire was so hot, so massive that I knew the fire extinguisher wouldn’t do a thing.” One individual launched a kayak and paddled safely to shore.

The 16 remaining people untied two boats located toward the outer end of the dock. Twelve individuals boarded an unoccupied cabin cruiser-style boat and pushed it away from the dock. The last four individuals boarded a similar unoccupied vessel and also pushed it away. The evacuees were unable to get either boat’s engine running to safely navigate away from the fire and resorted to paddling the boats with folding chairs and wash brushes.



**Dock B engulfed in flames at 0054 CST. (Source: J. Lindsey)**

Scottsboro police officers arrived on scene at 0045 and notified dispatch that the “whole dock was on fire.” A fire engine from Scottsboro Fire Station 2 arrived 4 minutes later and began setting up to fight the fire. County Sheriff’s officers arrived and searched the other docks at the marina for a boat that could be used for rescue; they found none. Eyewitness photographs taken at this time show Dock B fully engulfed in fire and many boats burning in their slips.



**Evacuees aboard the two vessels prior to catching fire, drifting toward the end of Dock B at 0109 CST. (Source: J. Lindsey)**

The evacuees aboard the two vessels had been unable to reach shore or any of the other docks at the marina. As the fire fully engulfed the dock, the two boats were drawn back toward the end of Dock B, in what some survivors referred to as a fire-induced draft or vortex. At 0109, an eyewitness photograph captured the two vessels drifting just feet from the end of the Dock B.

A few moments later, vacant boats fully consumed in flames, whose mooring lines were burned through, drifted freely from

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Dock B. One of these boats collided with the vessel containing four evacuees and quickly caught the boat on fire. The four occupants abandoned the boat into the 41°F water. One individual from the cabin cruiser with 12 people jumped into the water and attempted to fend off the burning vessels as they approached. Many of the remaining 11 people on the boat, some small children, retreated to the cabin of the vessel. Shortly after, a burning vessel collided with the cabin cruiser and, according to one survivor, “immediately” caught the vessel on fire. Four of the 11 occupants abandoned the vessel into the water. The seven occupants who remained in the cabin of the vessel—five children, their mother, and another woman—became trapped by the flames and perished in the fire. Of the total nine occupants who abandoned the two vessels, none wore life jackets. One individual drowned, and the eight others either swam to shore or were assisted to shore by the Jackson County Rescue Squad, who had responded to the fire. First responders treated the survivors for exposure and burns on scene, and seven survivors with more serious injuries were transported to a local hospital for treatment.

The metal roof on Dock B collapsed once the fire had consumed the support structure. Some boats did not drift away from the dock, but instead burned to the waterline and sank within their slips. The fire eventually burned itself out with the help of firefighting efforts. An estimated 4,000 gallons of fuel and lube oil was released and consumed during the fire, and approximately 4,000 feet of absorbent boom and 7,700 feet of deflection boom were used. All victims were recovered once daylight broke, followed by salvage efforts and pollution mitigation.

### Additional Information

Some houseboats at Jackson County Park Marina were occupied year-round as primary residences by individuals and families, while others were used as second homes or vacation destinations. Much of the dock space at each slip and external deck space aboard the vessels housed plastic chair and table sets, rugs, propane grills, and other potentially combustible material. A number of the vessels had inoperable or laid-up engines, and many of the boats had been tied to the dock for long periods of time. Park management told investigators that the *Dixie Delight* had been at the marina for 10 years. Both the owner of the vessel at the time of the accident and the previous owner told investigators that they had never operated the vessel’s engines and that the vessel had not left slip #36 during their ownership.

Several survivors interviewed after the fire said that although personal flotation devices (PFDs) were available aboard their own vessels, they did not think to take them before having to evacuate. After leaving the burning dock by boarding two unoccupied vessels, evacuees located only a single life ring; it was thrown to one of the first individuals to abandon one of the vessels. Park management told investigators that there were no marina-provided PFDs or life rings located on Dock B.

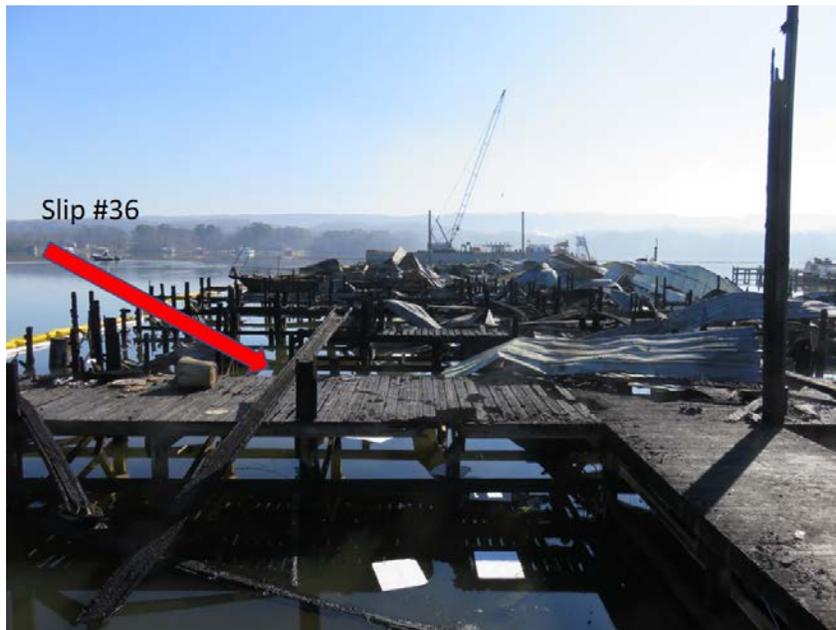
The Jackson County Park and Marina had been inspected by the Scottsboro Fire Department twice, once in April 2012 and once in 2016. The 2012 inspection had no violations; the 2016 inspection cited a presence of a charcoal grill and a gasoline container on the docks. State code did not require these inspections, and they were completed by the local fire department as a courtesy.

Alabama’s current state fire code is comprised of the International Fire Code (IFC) and additions from the National Fire Protection Association (NFPA) codes, including NFPA 303, a section on fire safety standards for marinas and boatyards. NFPA 303 includes guidance on

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electrical equipment, berthing and storage, and standpipes for marinas and boatyards. The standard also includes requirements for annual electrical inspections, marina employee fire response training, biannual fire drills, and the designation of a fire department liaison who would be responsible for submitting a “pre-fire plan” to the local fire department and the authority responsible for enforcing the code. When Dock B was built in 2003, Alabama had not yet adopted these standards into state fire code. Therefore, these safety measures were not required.

The National Water Safety Congress (NWSC) is an organization composed of safety professionals and organizations whose mission is to further water safety. It developed Guidelines for the Safe Operation and Maintenance of Marinas, revised in 2001, which include many similar requirements to NFPA 303 such as employee fire training, annual electrical inspections, and engagement with the local fire department. In addition, the Guidelines suggest a safety skiff to be available and ready for use. Specifically, this “skiff should



**Dock B the day after the fire. The remains of the *Dixie Delight* are submerged in slip #36.**

be used to tow a vessel that may be on fire to open water away from other craft or structures.”

The wreckage of the *Dixie Delight* was located submerged in its original slip. What remained of the vessel was salvaged two days after the fire and examined by state and federal fire investigators. After a thorough and systematic examination of the wreckage, the State fire investigator was “unable to determine an area of origin due to all combustible material being consumed by the fire.” The State’s report also concluded that the fire appeared to be “accidental.”

## Analysis

The ignition source of the fire aboard the *Dixie Delight* could not be determined because of the scale of fire damage. Considering the owner’s firsthand account and where he first saw flames, it is likely that the fire originated in the bulkhead between the vessel’s electrical panel and storage closet. The fire spread due to the neighboring vessels of similar fiberglass construction, an abundance of combustible lawn furniture on the vessel decks and open dock areas, and the presence of portable liquid propane cylinders used for barbecue grills, which all increased the dock’s fire load.

At the time of the fire, Alabama’s fire codes for covered docks and marinas were not applicable to Dock B, which had been constructed prior to their adoption. Nonetheless, marinas should have measures and guidelines in place to prevent and mitigate accidents for all moored boats and their occupants. The Jackson County Park Marina did not observe several existing safety

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best practices and guidelines created for and used by the marina industry. Safety practices such as annual electrical inspections, employee fire training, biannual fire drills, and the development of a pre-fire plan with the fire department can better prepare marina staff and boat owners for a vessel or dock fire. In addition, a safety skiff, as recommended by guidelines, can be used by marina staff or first responders to assist in an emergency.

### Probable Cause

The National Transportation Safety Board determines that the probable cause of the fire aboard the *Dixie Delight* and subsequent fire at Dock B was a fire of unknown source, originating aboard the *Dixie Delight* in the vicinity of the vessel's electrical panel. Contributing to the severity of the fire and loss of life were the County and marina's limited fire safety practices.

### Marina Fire Safety

The close proximity of vessels in marinas can cause fires to spread quickly, preventing evacuation. Marina owners should assess their own operations, consult relevant fire safety guidance, and review fire plans in concert with local fire departments. Marina boat owners should familiarize themselves with their marina's fire plan and review their vessels' potential fire hazards and firefighting equipment.

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### Vessel Particulars

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Vessels	<i>Multiple (35) recreational boats</i>
<b>Owner/operator</b>	Private
<b>Port of Registry/Homeport</b>	Various
<b>Flag</b>	N/A
<b>Type</b>	Houseboat/cabin cruiser/pontoon/other
<b>Year built</b>	Various
<b>IMO number</b>	N/A
<b>Classification society</b>	N/A
<b>Construction</b>	Fibre Reinforced Polymer/other
<b>Length</b>	Various
<b>Beam/width</b>	Various
<b>Draft</b>	Various
<b>Tonnage</b>	N/A
<b>Engine power; manufacturer</b>	Various
<b>Persons on board</b>	18

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**NTSB investigators worked closely with our counterparts from Coast Guard Sector Ohio Valley and Marine Safety Detachment Nashville throughout this investigation.**

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For more details about this accident, visit [www.nts.gov](http://www.nts.gov) and search for NTSB accident ID DCA20FM013.

### Issued: September 3, 2020

The NTSB has authority to investigate and establish the probable cause of any major marine casualty or any marine casualty involving both public and nonpublic vessels under Title 49 *United States Code*, Section 1131. This report is based on factual information either gathered by NTSB investigators or provided by the Coast Guard from its informal investigation of the accident.

The NTSB does not assign fault or blame for a marine casualty; rather, as specified by NTSB regulation, “[NTSB] investigations are fact-finding proceedings with no formal issues and no adverse parties . . . and are not conducted for the purpose of determining the rights or liabilities of any person.” Title 49 *Code of Federal Regulations*, Section 831.4.

Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by conducting investigations and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report. Title 49 *United States Code*, Section 1154(b).

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