

REPORT#: 17MI208

REPORT DATE: 3/9/20

INCIDENT HIGHLIGHTS



DATE:

Summer, 2017



TIME:

Unknown



VICTIM:

Marina Owner in his 80s



INDUSTRY/NAICS CODE:

Arts/Entertainment and
Recreation/71



EMPLOYER:

Marina Owner



SAFETY & TRAINING:

General Boating Safety



SCENE:

Marina boat slip



LOCATION:

Michigan



EVENT TYPE:

Drowning

Marina Owner Drowned in Six-foot Deep Water in Marina Slip

SUMMARY

In Summer 2017, a male marina owner in his 80s drowned after falling into six-foot deep water at a boat slip located in a marina on a river. The decedent was working at the marina, perhaps on a boat, and when he did not return home at his normal time, his spouse tried to contact him. Unable to reach him, she called a family member who went to the marina. Unable to find him, emergency response was contacted. The responding sheriff department found him floating upright in the water, under a boat slip walkway.... [READ THE FULL REPORT](#) > (p.3)

CONTRIBUTING FACTORS

Key contributing factors identified in this investigation include:

- Personal flotation device (PFD) and non-slip shoes not worn
- Emergency escape ladders or life rings not installed
- Cluttered, narrow boat slip walkways
- Medical condition may have caused him to lose balance
- Working alone

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RECOMMENDATIONS

MIFACE investigators concluded that, to help prevent similar occurrences, employers should:

- Wear a PFD and non-slip shoes while working on docks and boats
- Place safety ladders and life rings throughout the marina
- Boat slip walkways should have a non-slip surface

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State **FACE** Program

Fatality Assessment & Control Evaluation

Michigan State University

Department of Medicine • Occupational and Environmental Medicine

909 Fee Road, 117 West Fee Hall • East Lansing, MI 48824

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Michigan Fatality Assessment and Control Evaluation (FACE) Program

MIFACE (Michigan Fatality Assessment and Control Evaluation), Michigan State University (MSU) Occupational & Environmental Medicine, 909 Fee Road, 117 West Fee Hall, East Lansing, Michigan 48824-1315; <http://www.oem.msu.edu>.

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SUMMARY

In Summer 2017, a male marina owner in his 80s drowned after falling into six-foot deep water at a boat slip located in a marina on a river. The decedent was working at the marina, perhaps on a boat, and when he did not return home at his normal time, his spouse tried to contact him. Unable to reach him, she called a family member who went to the marina. Unable to find him, emergency response was contacted. The responding sheriff department found him floating upright in the water, under a boat slip walkway. The bottom was described as mucky. The decedent was not wearing a personal flotation device.

INTRODUCTION

In Summer 2017, a male marina owner in his 80s drowned after falling into six-foot deep water in a marina boat slip. MIFACE learned of this incident upon locating an obituary. MIFACE personnel contacted the decedent's spouse who agreed to be interviewed. The decedent's spouse accompanied the MIFACE researcher to the marina where the incident took place. MIFACE reviewed the death certificate, police and medical examiner reports during the writing of this report. Pictures used in the report are courtesy of the responding police department and ones taken at the scene of the incident by the MIFACE investigator. MIFACE has removed identifying information from the photographs.

EMPLOYERS

The decedent owned the marina for 25 years. He added an outbuilding with two overhead garage doors to permit two cars to enter through the overhead doors to park inside to unload and access the boat. As the boat slip owners sold their slips, he bought them. Additionally, he stored boats in a fenced area around the marina.

The decedent's primary residence was in another state. The decedent and his wife would return to Michigan in the summer to enjoy the weather and time with family. The decedent was planning to sell the marina and went there daily while in Michigan to upgrade/renovate it for sale. For example, he had upgraded the outbuilding with two overhead doors (Photo 1), laid new dock pilings and re-laid the wood planks or fixed holes cut into the planks between boats.

The decedent also provided boat maintenance for the boat owners. He was described by his spouse as a good swimmer. The decedent's spouse also indicated that the decedent's boat also needed some repairs.

WRITTEN SAFETY PROGRAMS and TRAINING

The decedent did not have a written health and safety policy. He had not received training in marina operations.



Photo 1. Marina building

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WORKER INFORMATION

The decedent had worked various jobs throughout his lifetime and was described by his spouse as a “work-a-holic”, even in retirement. His spouse described him as a “risk-taker” and that he took “a lot of chances in life”. He loved racing boats, motorcycles and cars.

He began his working lifetime when he was five years old delivering newspapers. He worked as a handyman for his father-in-law renovating apartments, as a store clerk in his father-in-law’s stores, as a union electrician, and as the owner of two bakery thrift shops.

While owning the two bakery thrift shops, he (and his spouse and kids eventually) drove a truck to pick up bakery items to resell at 4:00 a.m. After delivery, the decedent went to work as a full-time electrician.

While working for his father-in-law at one of the father-in-law’s stores in 1991, the decedent was shot in the stomach during a robbery attempt. The bullet lodged in his back. The decedent was initially paralyzed from the bullet damage and subsequent surgery to remove the bullet. His spouse indicated the decedent was determined that he would not be paralyzed. Undergoing intense physical therapy, he regained his mobility, but, according to his wife, his right leg was damaged and periodically “gave out” unexpectedly on him, causing him to fall.

He was an avid boater. He did not wear a life preserver while performing job tasks on the boats moored in the marina or while working near the water.

INCIDENT SCENE

The marina was located on a river. The marina consisted of a single level building that was fenced in (Photo 1). Access to the boats from the roadside was provided by two overhead doors and pedestrian doors. The inside of the building, including the walkways between boats were cluttered. There were five marina slips of different sizes (approximately 10-12 feet wide) to accommodate different boat sizes.

Wood plank walkways between boats provided access to/from boats (Photos 2, 5, and 6). The walkways consisted of two eight-inch wood planks anchored together. The walkways also supported boats undergoing maintenance. There were no railings on either side of the walkways. Wooden access steps to the boats were placed on the walkways. Posts supporting the roof trusses were placed in the middle of the walkways



Photo 2. Example of boat slip walkway

Per the responding sheriff report, the decedent was found in approximately six feet of water. At the time of the MIFACE visit, the water level was several feet higher, thus in the MIFACE photos, the boats are sitting higher in the water.

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It is unknown if the marina doors facing the water allowing boats to exit/enter the marina were open when the decedent was found.

WEATHER

The weather may have been a factor in the incident. Temperatures ranged from 77°F to 87°F the week prior to the incident; 87°F occurred two days prior to the incident. On the day of the incident the outside temperature was 75°F. Low temperatures ranged from 62°F to 69°F. Humidity ranged from 84% to 100% prior to the incident, with an average humidity of 88%. The overhead doors and doors providing access to the river would have been closed and locked when the decedent would leave for the evening. Thus, the temperature and humidity inside of the building may have stayed elevated. [[Weather Underground](#)].

If the building doors had been kept closed, the temperature inside of the building may have been hot and humid.

The river bottom in the marina was described as “mucky”. The water was still (no current). The temperature of the water was unknown. Neither the sheriff or the medical examiner investigator checked the water for stray electrical current.

INVESTIGATION

The decedent’s normal work day began between 6:00 a.m. – 7:00 a.m. when he would leave the house for the marina, returning at dinner time. The decedent’s son was usually at the marina with him. But on the day of the incident, he was in the hospital having been admitted the previous day.

According to his wife, the decedent had fallen at least 2 times, maybe 3 times into the water when his leg “collapsed” unexpectedly. When he fell into the water, his son would pull him out. The son tried to lower a ladder but depending on the situation/location, the ladder would sink into the muck. The decedent began to keep extra clothes at the marina because of his tendency to fall in the water.

On the day of the incident, the decedent left home for the marina a little later than usual, approximately 8:30 a.m. The decedent did not tell his wife what he was planning to accomplish that day at the marina, so his activity(ies) were unknown.



Photo 3. Boat A where sheriff found tools, keys in ignition and work light

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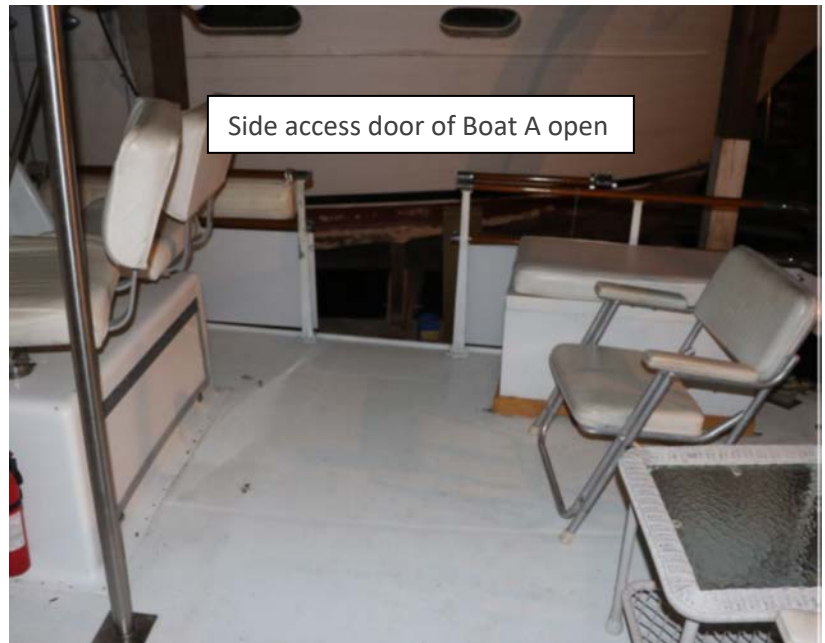
Sheriff pictures taken at the scene show Boat A in slip 3 with tools on the deck, keys in the ignition, a work light, and the side deck access doors open on each side of the boat (Photos 3 and 4). In slip 4, on a horizontal plank running across the slip width holding a boat aloft there is an empty coffee can. The sheriff pictures taken at the scene show the same coffee can location as the MIFACE picture (Photo 6).

When the decedent did not return home for dinner at 5:00 p.m., his spouse waited for an hour and then tried calling his cell phone several times. All calls went directly to voice mail. When he did not return the phone calls, she called the local hospital asking for her husband, thinking he may have been injured at the marina. There was a person by that name, and when his wife was connected to the room, she found out that the decedent's son had been admitted.

His wife then called another family member at approximately 8:40 p.m., asking her to go to the scene to try to find him. While awaiting the family member's phone call, his spouse called 911 saying her husband was missing.

The city police came to the decedent's home and spoke with his spouse. While speaking with the police, the family member who was asked to go to the marina called and indicated that the car was there, the doors to the marina were unlocked, that she had entered and called out to him, that he did not answer, and that, when she looked for him, she could not find him..

Responding police stated they could not respond to the marina because it was not their jurisdiction. While his wife was speaking with the city police, the family member called and told her that she could not find him. The local police then called the sheriff.



Side access door of Boat A open

Photo 4. Boat A – Decedent may have been working on this boat

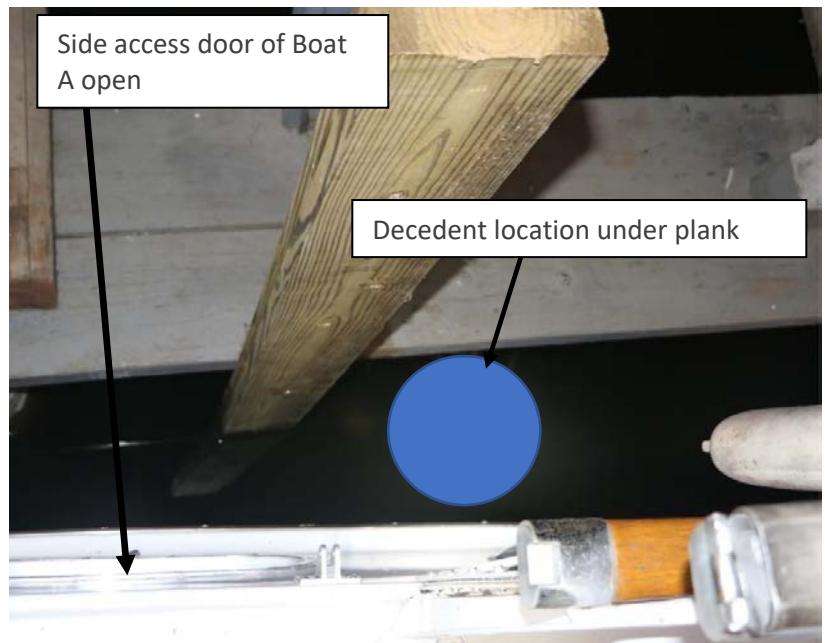


Photo 5. Boat A, open access door, location of decedent in water

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The sheriff arrived and found the decedent, unresponsive and floating upright, in the water under the planks between Boat A and Boat B (Photos 5 and 6). The crown of his head was visible. He was not restrained in any way under the water. For reasons unknown, the decedent fell into the water. Because he was working alone, there was no one to assist him and no safety ladder available, he was unable to pull himself up out of the water and eventually drowned. He was declared dead at the scene.

MIOSHA Citations

MIOSHA did not conduct a compliance investigation.

CAUSE OF DEATH

The death certificate listed the cause of death a drowning. Other significant conditions contributing to death but not resulting in the underlying cause was atherosclerotic cardiovascular disease. Post-mortem toxicology was negative for alcohol, illegal and prescription drugs.

CONTRIBUTING FACTORS

Occupational injuries and fatalities are often the result of one or more contributing factors or key events in a larger sequence of events that ultimately result in the injury or fatality. The following hazards were identified as key contributing factors in this incident:

- *Personal flotation device and non-slip shoes were not worn*
- *No ladder or other escape pathway from the water to the dock*
- *Cluttered, narrow boat slip walkways*
- *Medical condition may have caused him to lose balance*
- *Working alone*

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Wear a personal flotation device (PFD) and non-slip shoes while working on docks and boats.

Discussion: The decedent had fallen into the water while at the marina at least two times prior to this incident. He was fortunate that his son was there to assist him in getting out of the water. Each time, the decedent was not wearing a personal flotation device (life preserver). Workers give a variety of reasons for not wearing a PFD including perceived lack of comfort and restrictions to movement while working. MIFACE recommends that anyone who works at a dock or on a boat wear a Coast Guard approved PFD to keep them from submerging in water if they fall into it. There are two basic types of PFDs available; inflatable and foam-based. Inflatable PFDs are lighter weight, higher cost, and require more

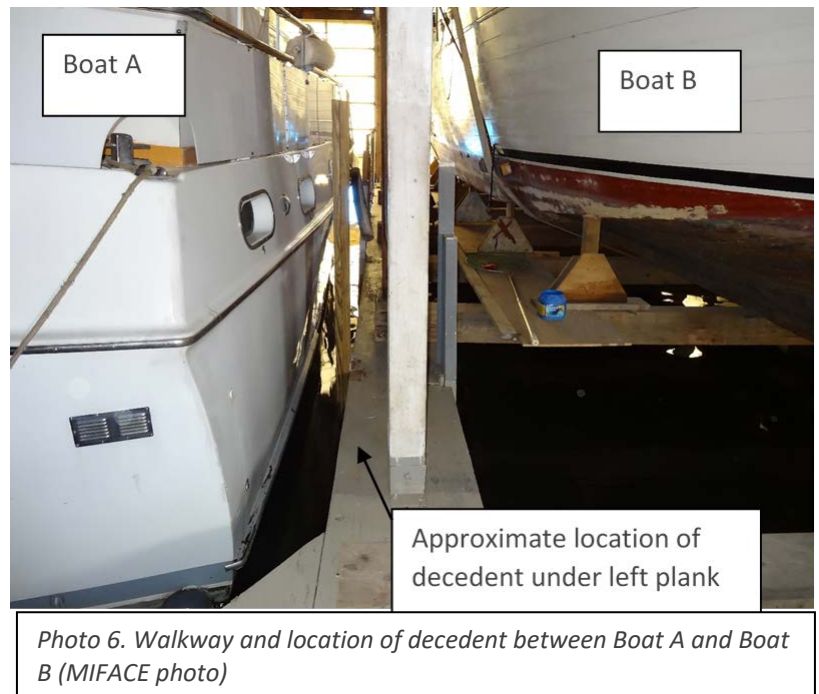


Photo 6. Walkway and location of decedent between Boat A and Boat B (MIFACE photo)

manufacturer-required maintenance than a foam-based PFD, but they provide for less restrictive movement. Foam-based PFDs require less maintenance but are a bit bulkier and may restrict movement.

It is extremely important that the PFD selected is Coast Guard approved, in good and serviceable condition and is the appropriate size for the intended user to ensure that the wearer's head is kept above water and keeps the user in a position where it is easier to breathe.

NIOSH DHHS (NIOSH) Publication Number 2013-131: *PFDs That Work* describes personal flotation device research performed with commercial fishermen to evaluate both inflatable and foam-based pfd's. MIFACE encourages readers of this report to review this very readable research publication. Readers can access the document in the Resources section at the end of this report or here: <https://www.cdc.gov/niosh/docs/2013-131/default.html>

Additionally, while on the dock and/or in the boat, the decedent was not wearing non-slip shoes. Non-slip shoes come in many styles and are designed to reduce the likelihood of a slip-and-fall.

Recommendation #2: Place safety ladders and life rings throughout the marina.

Discussion: The marina did not have any securely anchored fixed safety (emergency) ladders at any of the five boat slips in the marina, providing an opportunity to exit the water. The *Planning and Design Guidelines for Small Craft Harbors, ASCE Manuals and Reports on Engineering Practices No. 50* recommends:

“Ladders are generally provided on fixed and floating docks to allow emergency access from the water. In addition, where the tide range and fixed piers may not provide convenient berthing access at all tidal stages, ladders are also provided adjacent to the berths (from the finger piers). According to the requirements of UFC 4-152-01 (NAVFAC 2005), ladders to provide access to fixed piers (or floating docks) from the water should be provided at a maximum spacing of 120 m (400 ft) on centers [sic] or within 60 m (200 ft) of any work area.

Ladders should be a minimum of 406 mm (16 in.) wide and reach the lowest water elevation anticipated. Retractable or flip ladders may be used as an alternative to fixed ladders to avoid marina fouling of the lower steps, but they can be difficult for a swimmer to reach and pull down in case of an emergency. There are numerous commercially available ladders made typically of marine-grade aluminum or stainless steel.”

Various forms of “lifting ladders” are convenient for floating docks, where they can be kept in the retracted position until needed. For recreational small craft harbors, ladders are generally spaced according to the management's anticipated needs, clientele usage, and safety plan. They are often placed at the ends of T-heads of finger piers (so as to not affect berthing in the slips), in fairways, or adjacent to bulkheads so that anyone who may fall into the water can easily swim to a ladder without crossing under or through piers and vessels or across main navigable waterways.”

MIFACE recommends that marina owners also paint the ladders a bright color so the ladders can easily be seen by individuals in the water and use signage to indicate the location of the ladder(s).

Life rings should also be readily available. A life ring presents the opportunity for someone standing on the dock or pier to assist the person in the water.

Recommendation #3: Boat slip walkways should have a non-slip surface to minimize a slip and fall while getting on/off boats and while walking.

Discussion: There are numerous ways to experience a slip and fall while working. An individual can slip and lose balance due to a wet/icy/snowy surface, trip over objects in the walkway, or fall from an elevated position above the ground. MIFACE recommends, and MIOSHA requires that walkways are maintained free of hazards such as sharp or protruding objects, loose boards, corrosion, leaks, spills, snow, and ice. In this incident, the walkways were near water. Walkways near water should have a slip-resistant coating or slip-resistant tape applied to minimize a slip and fall occurrence. Selection of an anti-slip products should take into consideration a wet environment.

The decedent was not wearing shoes that were slip-resistant, which increased the likelihood that if he encountered a wet surface, he would slip and fall. MIFACE recommends slip-resistant soled shoes when working in a potentially wet/wet environment.

Recommendation #4: When working alone, establish a check-in procedure with another individual to help assure prompt emergency assistance.

Discussion: A person is considered "alone" at work when they are on their own; when they cannot be seen or heard by another person. The decedent had medical issues that made him prone to a fall. There were no ladders or other emergency exits from the water and previously, his son had rescued him. On the day of the incident, when he fell, there was no one there to help. It is important to establish an effective communication system for an individual who is working alone to contact other people who can provide emergency assistance.

The frequency of checking in to another individual should be appropriate based on the hazards to which the lone worker is exposed. The check-in procedure can be initiated by a family member or the individual who is working alone and should be established based upon what is practical for the worksite circumstances. The availability of cell phone coverage should be established if that is the means of communication selected.

Examples of options to check on individual working alone include: (a) communication checks via two-way radio or cell phone, (b) lone worker smart phone applications, (c) personal tracking devices, etc.

Although it may not have prevented his death, a scheduled time to check in with someone when an individual is working alone could prevent an injury from becoming a fatality.

ADDITIONAL RESOURCES

- Centers for Disease Control. Personal Flotation Devices that Work. <https://www.cdc.gov/niosh/docs/2013-131/default.html>
- Robson Forensics. *Guidelines, Regulations & Safety Standards Related to Marina Drownings – Expert Research* <https://www.robsonforensic.com/articles/marina-drowning-expert-witness/>
- The Planning and Design Guidelines for Small Craft Harbors, ASCE Manuals and Reports on Engineering Practices No. 50. <https://ascelibrary.org/doi/book/10.1061/9780784411988>



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- MIOSHA General Safety Standard Part 2: Walking-Working Surfaces. https://www.michigan.gov/leo/0,5863,7-336-78421_11407_15368-39941--,00.html
- National Water Safety Congress. [Guidelines for the Safe Operation and Maintenance of Marinas.](#)

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REFERENCES

Weather Underground [2014]. Weather history for nearby weather station. The Weather Channel Interactive, Inc.

ACKNOWLEDGEMENT

The Michigan FACE Program would like to acknowledge the decedent's spouse for providing assistance and information for this investigation.