



UNITED STATES COAST GUARD

**REPORT OF THE INVESTIGATION
INTO THE
WARREN W HINES (O.N. 651210) AND
PERSONAL WATERCRAFT (TN4176TB)
COLLISION WITH LOSS OF LIFE NEAR
CUMBERLAND RIVER MILE 151 ON
SEPTEMBER 9, 2023**



MISLE ACTIVITY NUMBER: 7788544

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

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16732/IIA #7788544
11 April 2025

**COLLISION BETWEEN THE INSPECTED TOWING VESSEL WARREN W HINES
(O.N. 651210) AND PERSONAL WATERCRAFT (TN4176TB), RESULTING IN THE
LOSS OF TWO LIVES IN THE VICINITY OF MILE 151.5 ON THE CUMBERLAND
RIVER NEAR NASHVILLE, TENNESSEE ON SEPTEMBER 9, 2023**

ACTION BY THE COMMANDANT

The record and the report of investigation completed for this marine casualty have been reviewed by the Office of Investigations & Casualty Analysis. The record and the report, including the findings of fact, analyses, and conclusions are approved. This marine casualty investigation is closed.



E. B. SAMMS
Captain, U.S. Coast Guard
Chief, Office of Investigations & Casualty Analysis (CG-INV)



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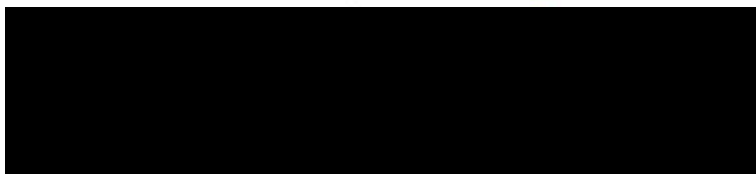
**WARREN W HINES (O.N. 651210) AND PERSONAL WATERCRAFT (TN4176TB)
COLLISION WITH LOSS OF LIFE NEAR CUMBERLAND RIVER MILE 151.5 ON
SEPTEMBER 09, 2023**

**ENDORSEMENT BY THE COMMANDER,
EIGHTH COAST GUARD DISTRICT**

The record and the report of the investigation convened for the subject casualty have been reviewed. The record and the report, including the findings of fact, analysis, conclusions, and recommendations are approved. It is recommended that this marine casualty investigation be closed.

COMMENTS ON THE REPORT

1. The loss of the passengers was a tragic and preventable accident. I offer my sincere condolences to the friends and family of the passengers who lost their lives.
2. The investigation and report contain valuable information which can be used to address the factors that contributed to this marine casualty and prevent similar incidents from occurring in the future.



L. E. FOTHERGILL

Commander, U.S. Coast Guard
Chief of Prevention, Acting
Eighth Coast Guard District
By Direction

U.S. Department of
Homeland Security

United States
Coast Guard



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16732
24 Feb 2025

**WARREN W HINES (O.N. 651210) AND PERSONAL WATERCRAFT (TN4176TB)
COLLISION WITH LOSS OF LIFE NEAR CUMBERLAND RIVER MILE 151.5
ON SEPTEMBER 09, 2023**

ENDORSEMENT BY THE OFFICER IN CHARGE, MARINE INSPECTION

The record and report of investigation convened for the subject casualty have been reviewed. The record and report, including the findings of fact, analysis, conclusion, and recommendations are approved subject to the following comments. It is recommended that this marine casualty investigation be closed.

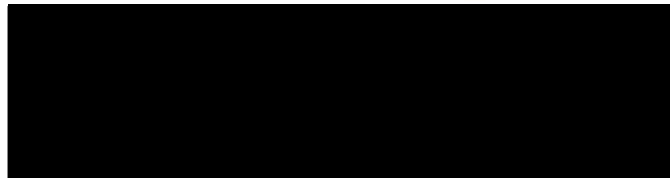
ENDORSEMENT ON RECOMMENDATIONS

Safety Recommendation: There were no proposed actions to add new or amend existing U.S. law or regulations, international requirements, industry standards, or U.S. Coast Guard policies and procedures as part of this investigation.

Endorsement: Concur.

Administrative Recommendation: Recommend this investigation be closed.

Endorsement: Concur.



WEATHER R. MATTERN
Captain, U.S. Coast Guard
Commander, Sector Ohio Valley
Officer in Charge, Marine Inspection

Encl: Report of Investigation dated February 20, 2025



16732
February 20, 2025

**WARREN W HINES (O.N. 651210) AND PERSONAL WATERCRAFT (TN4176TB)
COLLISION WITH LOSS OF LIFE NEAR CUMBERLAND RIVER MILE 151.5
ON SEPTEMBER 09, 2023**

EXECUTIVE SUMMARY

On September 9, 2023, the towing vessel WARREN W HINES (O.N. 651210) was underway upbound on the Cumberland River with 12 loaded hopper barges and one empty hopper barge in tow (pushing-ahead). The towing configuration consisted of four barges long by three barges wide with the empty hopper barge solo on the front and center of the tow. The WARREN W HINES had a crew of eight on board.

Additionally, on September 9, 2023, at approximately 1306cst the personal watercraft TN4176TB launched from Mouth Johnson Creek Road boat ramp in Charlotte, Tennessee near Cumberland River Mile Marker 149.5. Onboard TN4176TB was the vessel operator (no passengers). TN4176TB transited upbound and moored at Harpeth Island in vicinity of Cumberland River Mile Marker 155. While on the island the operator spent the afternoon with friends and family. After nearly six hours on the island, TN4176TB was underway and transiting downbound with the vessel operator and a passenger onboard. Witnesses stated that TN4176TB was returning to Mouth Johnson Creek Road boat ramp. The predicted time of sunset was 1905cst; TN4176TB was not equipped with navigation lights.

WARREN W HINES had continued its upbound transit at approximately three miles per hour. Conversely, TN4176TB was traveling downbound at approximately 46 miles per hour. The vessels, WARREN W HINES and TN4176TB, simultaneously entered a bend at Cumberland River Mile Marker 151.5 while transiting in opposing directions. Thus, the vessels collided with the bow of TN4176TB striking the starboard side of the empty lead barge, AGS-245-B.

TN4176TB then careened off AGS-245-B and struck the headlog (bow) of the starboard lead barge, PBM-406. TN4176TB catastrophically came apart upon impact and sank. The operator was located within minutes by the crew of WARREN W HINES and taken to shore. Upon arrival at the shore, the operator was declared deceased by emergency medical personnel.

The passenger was located approximately 24 hours later after resurfacing from underneath WARREN W HINES and tow (barge configuration). The passenger was declared deceased upon recovery. The operator and passenger onboard TN4176TB were both wearing life jackets at the time of the collision. The remnants of TN4176TB were recovered by Tennessee Wildlife Resources Agency (TWRA) the following week.

The Coast Guard Investigation identified the collision as the initiating event and deemed causal factors to be: 1) preconditions on the part of the Owner/Operator being under the influence of alcohol and marijuana; and 2) precondition of the environment being at twilight with shadows and partial darkness on the river.



16732
February 20, 2025

**WARREN W HINES (O.N. 651210) AND PERSONAL WATERCRAFT (TN4176TB)
COLLISION WITH LOSS OF LIFE NEAR CUMBERLAND RIVER MILE 151.5
ON SEPTEMBER 09, 2023**

INVESTIGATING OFFICER'S REPORT

1. Preliminary Statement

1.1. This marine casualty investigation was conducted and this report was submitted in accordance with Title 46, Code of Federal Regulations (CFR), Subpart 4.07, and under the authority of Title 46, United States Code (USC) Chapter 63.

1.2. No parties requested or were designated as a Party in Interest in accordance with 46 C.F.R. § 4.03-10.

1.3. This investigation was conducted by the United States Coast Guard, with assistance from the Tennessee Wildlife Resources Agency (TWRA).

1.4. All times listed in this report are in Central Daylight Savings Time using a 24-hour format and are approximate.

2. Vessels Involved in the Incident



Figure 1. WARREN W HINES (Marine Traffic com) (September 12, 2023/USCG)

Official Name:	WARREN W HINES
Identification Number:	O.N. 651210
Flag:	United States
Vessel Class/Type/Sub-Type	Towing Vessel/Push Ahead
Build Year:	1981
Gross Tonnage:	338 GT
Length:	148 feet
Beam/Width:	30 feet
Draft/Depth:	9.2 feet
Main/Primary Propulsion: (Configuration/System Type, Ahead Horse Power)	Twin Diesel Reduction, 4200 HP
Owner:	HFL VESSELS LLC Paducah, Kentucky/USA
Operator:	HFL VESSELS LLC Paducah, Kentucky/USA



Figure 2. AGS245B (September 09, 2023/USCG)

Official Name:	AGS 245 B
Identification Number:	O.N. 1098603
Flag:	United States
Vessel Class/Type/Sub-Type	Hopper Barge
Build Year:	2000
Gross Tonnage:	764 GT
Length:	200 feet
Beam/Width:	35 feet
Draft/Depth:	13 feet
Owner:	WELLS FARGO EQUIPMENT FINANCE Minneapolis, MN/USA
Operator:	HFL VESSELS LLC Paducah, Kentucky/USA



Figure 3. TN4176TB (November 30, 2023/USCG)



Figure 4. TN7554UR (September 13, 2023/USCG)

*For comparison ONLY – Not involved in incident

Official Name:	TN4176TB
Identification Number:	YDV53926C020
Flag:	United States
Vessel Class/Type/Sub-Type	Recreational/PWC/Jet-Ski
Build Year:	2020
Model:	GTI
Length:	130.6 inches
Beam/Width:	49.2 inches
Manufacturer:	Sea-Doo
Main/Primary Propulsion: (Configuration/System Type, Ahead Horse Power)	Gasoline/Water-Jet/Inboard
Owner/Operator:	[REDACTED] Charlotte, Tennessee/USA

3. Deceased, Missing, and/or Injured Persons

Relationship to Vessel	Sex	Age	Status
Owner/Operator	Male	36	Deceased
Passenger	Male	8	Deceased

4. Findings of Fact

4.1. The Incident:

4.1.1 On September 9th at 1300, The personal watercraft (jet-ski) TN4176TB was trailered (i.e., towed by automobile) to a gravel boat ramp located at mile marker 149.5 along the left descending bank of the Cumberland River. The boat ramp is on Mouth Johnson Creek Road within the city of Charlotte, Tennessee.

4.1.2. 1306, The operator of TN4176TB launched the personal watercraft (jet-ski) from the boat ramp located on Mouth Johnson Creek Road.

4.1.3. 1307, The personal watercraft TN4176TB got underway and began making-way with one person onboard (vessel operator) en route to Harpeth Island located in vicinity of mile marker 155.2 Cumberland River.

4.1.4. 1312, The personal watercraft TN4176TB arrived at Harpeth Island and moored along the shore.

4.1.5. 1629, WARREN W HINES was making-way pushing 13 barges upbound in vicinity of mile marker 148.7 on the Cumberland River. The barges in-tow (pushing-ahead) consisted of 12 loaded hopper barges and one empty hopper barge. The towing configuration was four barges long by three barges wide with the empty hopper barge on the front and center of the tow. The overall dimension of the tow was 1,130 feet long x 105 feet wide x with an average depth below the water line of 9.5 feet. The WARREN W HINES had a crew of eight personnel on board.

	PBM 143	NASH	PBM 67	NASH	PBM 153	NASH	PBM 2225	NASH	
AGS 245B	PBM 150	NASH	PBM 62	NASH	PBM 151	NASH	PBM 991	NASH	WWH
	PBM 406	NASH	PBM 2006	NASH	PBM 126	NASH	PBM 9079	NASH	

Figure 5. Tow Diagram, Configuration of barges in tow by WARREN H HINES (September 13, 2023/USCG)

4.1.6. 1630, WARREN W HINES and tow entered the Cheatham Lock at mile marker 148.7 on the Cumberland River and began locking through for the upbound transit.

4.1.7. 1756, A text message was sent to the operator of TN4176TB from his spouse. The text message stated "Ready yet". The operator of TN4176TB did not reply to the text message.

4.1.8. 1814, The operator of TN4176TB and his spouse spoke via mobile phones. The operator of TN4176TB stated that there was one other boat still on Harpeth Island. The

operator also stated that he and a passenger (son) would be getting underway soon to transit from Harpeth Island to the boat ramp on Mouth Johnson Creek Road.

4.1.9. 1830, WARREN W HINES and tow exited the Cheatham Lock at mile marker 148.7 on the Cumberland River and continued transiting upbound.

4.1.10. 1905, Sunset occurred at this time. Weather conditions were fair, the ambient temperature was 75 degrees Fahrenheit with winds at seven miles per hour out of the north. Precipitation was zero percent and the sky was fair/clear.

4.1.11. 1909, A phone call was made to the operator of TN4176TB from his spouse. The operator of TN4176TB did not answer.

4.1.12. 1910, Another phone call was made to the operator of TN4176TB from his spouse. The operator of TN4176TB again did not answer.

4.1.13. 1920, The operator of TN4176TB called his spouse via mobile phone; the vessel operator stated that they (operator and passenger of TN4176TB) were en route (Quote: "headed your way") to the boat ramp located at mile marker 149.5 Cumberland River. It is unclear whether the operator of TN4176TB phoned from Harpeth Island or after getting underway. As a note, family members commented that the operator always placed the cell phone in a waterproof case and secured it to the jet ski. Following the collision, the phone was located just as family members described, therefore it is likely that the operator had phoned from the island before getting underway.

4.1.14. 1921, TN4176TB departed Harpeth Island at mile marker 155.2 Cumberland River transiting downbound with two persons on board (operator and passenger). The vessel was not equipped with navigation lights. Additionally, the operator of TN4176TB was under the influence of alcohol and THC.

4.1.15. 1924, The operator's spouse arrived at the boat ramp located on Mouth Johnson Creek Road. The spouse phoned the vessel operator at 1925 and again at 1926 but the calls were unanswered.

4.1.16. 1925, WARREN W HINES and tow were transiting upbound in an easterly direction and approaching a bend in the Cumberland River in vicinity of mile marker 151.5. The towing vessels approximate speed was three miles per hour. The towing light configuration was energized and properly displayed.

4.1.17. 1925, TN4176TB was downbound traveling in a northwest direction and approaching a bend in the Cumberland River at mile marker 151.5. The jet ski's approximate speed was 46 miles per hour.

4.1.18. At 1926, TN4176TB collided head-on with the starboard side of the empty lead barge AGS-245-B. TN4176TB then careened off AGS-245-B and struck the headlog (bow) of the starboard lead barge, PBM-406. TN4176TB catastrophically came apart upon impact and sank. Both occupants of TN4176TB were killed upon collision with AGS-245-B.

4.1.19. 1930, The crew of WARREN W HINES launched a rescue boat attempting to locate and assist occupants of TN4176TB.

4.1.20. 1931, The Mate and Chief Engineer from WARREN W HINES were onboard the rescue boat. They quickly found and pulled the operator of TN4176TB onboard the rescue boat. The operator of TN4176TB was unconscious and not breathing. The WARREN W HINES crewmembers began CPR. At the time of recovery, the operator of TN4176TB was wearing a properly donned life jacket.

4.1.21. 1932, Crewmembers from WARREN W HINES began searching in vicinity of the towing vessel and barges but the passenger of TN4176TB was not found.

4.1.22. 1935, The Master of WARREN W HINES phoned 911 to report the accident. Emergency Services from Cheatham County, Ashland City and Tennessee Wildlife Resource Agency were notified.

4.1.23. 1936, The Mate and Chief Engineer from WARREN W HINES were transiting the rescue boat to the Lock-A-Campground boat ramp at mile marker 150.9 above Cheatham Lock and Dam with the operator of TN4176TB onboard.

4.1.24. 1948, The Master of WARREN W HINES phoned the Hines Furlong Line (HFL) Shoreside Manager.

4.1.25. 1950, The Master onboard WARREN W HINES notified the United States Coast Guard Sector Ohio Valley command center of the marine casualty. Investigators from USCG Marine Safety Detachment Nashville were dispatched to the scene of the accident.

4.1.26. 1955, The operator of TN4176TB was transferred from the rescue boat to emergency medical personnel that were waiting at the Lock-A-Campground boat ramp.

4.1.27. 1956, The operator of TN4176TB was transferred from the rescue boat to Cheatham County emergency medical personnel that were waiting at the Lock-A-Campground boat ramp.

4.1.28. 2000, Patrol vessels from the Tennessee Wildlife Resources Agency and vessels from other government agencies/departments began searching for the passenger of TN4176TB.

4.1.29. 2118, Law Enforcement officers from the Tennessee Wildlife Resources Agency and Cheatham County Sheriff's Department arrived onboard WARREN W HINES.

4.1.30. 2240, Two representatives (shoreside management) from Hines Furlong Line (HFL) arrived onboard WARREN W HINES.

4.1.31. 2310, Investigators from the United States Coast Guard and the Tennessee Wildlife Resources Agency arrived onboard WARREN W HINES.

4.1.32. On September 10th at 0800, The Tennessee Wildlife Resources Agency deployed an underwater Remotely Operated Vehicle (ROV). The ROV was utilized to search for the passenger of TN4176TB underneath WARREN W HINES and the barge configuration. The search was unsuccessful in locating the passenger.

4.1.33. 1810, Upon receiving permission from the U.S. Coast Guard and the Tennessee Wildlife Resources, the vessel WARREN W HINES resumed its upbound transit from Mile Marker 150 Cumberland River with thirteen barges in tow (pushing ahead).

4.1.34. 1835, The passenger of TN4176TB was located and recovered by emergency responders after resurfacing from underneath the tow (i.e., from underneath the barge configuration). Law Enforcement Officers of the Tennessee Wildlife Resource Agency were on scene at the time the passenger resurfaced.

4.1.35. 1842, The passenger of TN4176TB was declared deceased by Cheatham County emergency medical personnel.

4.2. Additional/Supporting Information:

Alcohol and Drug Testing

4.2.1 On September 9th at 2145, A blood sample for alcohol and toxicological testing was collected from the Master of WARREN W HINES. The blood sample was collected onboard WARREN W HINES by a Cheatham County emergency medical technician in the presence of Law Enforcement officers from the Tennessee Wildlife Resources Agency. The Tennessee Bureau of Investigation, Nashville Crime Laboratory assigned the sample and subsequent analysis the designation of Lab Case No. 231016968. On October 20th at 0900, The Tennessee Bureau of Investigation, Nashville Crime Laboratory issued the Official Alcohol Report for Lab Case No. 231016968. The result was negative for the presence of alcohol. On December 14th at 0900, The Tennessee Bureau of Investigation, Nashville Crime Laboratory issued the Official Toxicology Report for Lab Case No. 231016968. The result was negative for the presence of drugs.

4.2.2 On September 10th at 0750, a D.O.T. certified collector from Ensite, LLC arrived onboard WARREN W HINES to conduct Post-Marine Casualty (Serious Marine Incident) drug and alcohol testing as directed by the marine employer, Hines Furlong Line. On September 10th at 0842, a Breath Alcohol Test (Test No. 01553) was conducted for the Master of WARREN W HINES by the D.O.T certified collector. The result was negative (BAC .000) for the presence of alcohol. On September 10th at 0843, a Post-Marine Casualty drug testing urine sample, Specimen No. Y44051934, was collected from the Master of WARREN W HINES. The urine sample was collected by the D.O.T certified collector. On September 14th at 0900, A Medical Review Officer verified the results of urine sample Specimen No. Y44051934. The result was negative for the presence of drugs.

4.2.3 On September 10th at 0930, an autopsy, Case No. MEC23-3334, was conducted for the operator of TN4176TB by the Office of the Medical Examiner in Nashville, Tennessee. On September 10th at 1319, a forensic pathologist collected postmortem femoral blood and vitreous fluid samples from the operator of TN4176TB for toxicological analysis. The samples were designated Workorder No. 23361249 and associated with autopsy Case No. MEC23-3334. On October 1st at 1305, NMS Laboratories issued the official Toxicology Report for Workorder No. 23361249. The toxicology tests found that the Blood Alcohol Content (BAC) within femoral blood was 0.240 g/100 mL and that the Delta-9 THC content within femoral blood was 7.4 ng/mL. On December 7th, the Autopsy Report, Case No. MEC23-3334, was signed (finalized)

by the Forensic Pathologist from the Office of the Medical Examiner in Nashville, Tennessee.

4.2.4 On September 12th at 1030, an autopsy, Case No. MEC23-3353, was conducted for the passenger of TN4176TB by the Office of the Medical Examiner in Nashville, Tennessee. On September 12th at 1209, a forensic pathologist collected postmortem femoral blood and vitreous fluid samples from the passenger of TN4176TB for toxicological analysis. The samples were designated Workorder No. 23361373 and associated with autopsy Case No. MEC23-3353. On October 10th at 1104, NMS Laboratories issued the official Toxicology Report for Workorder No. 23361373. The toxicology tests found that the femoral blood and vitreous fluid were negative for the presence of alcohol and drugs. On December 7th, the Autopsy Report, Case No. MEC23-3353, was signed (finalized) by the Forensic Pathologist from the Office of the Medical Examiner in Nashville, Tennessee.

Waterway Information

4.2.16 The Cumberland River forms a 688-mile-long waterway from its headwaters in southeastern Kentucky near Harlan, flowing southwest through middle Tennessee and back north into western Kentucky where it empties into the Ohio River.

4.2.17 The location of the incident, near Harpeth Island lies within a 6 mile stretch of the Cumberland River (MM 149-155) within Cheatham County Tennessee. Harpeth Island is a common place for boaters and families to gather during the summer boating months.



Figure 6: Map of Cumberland River (Britannica.com) (September 14, 2023/USCG)

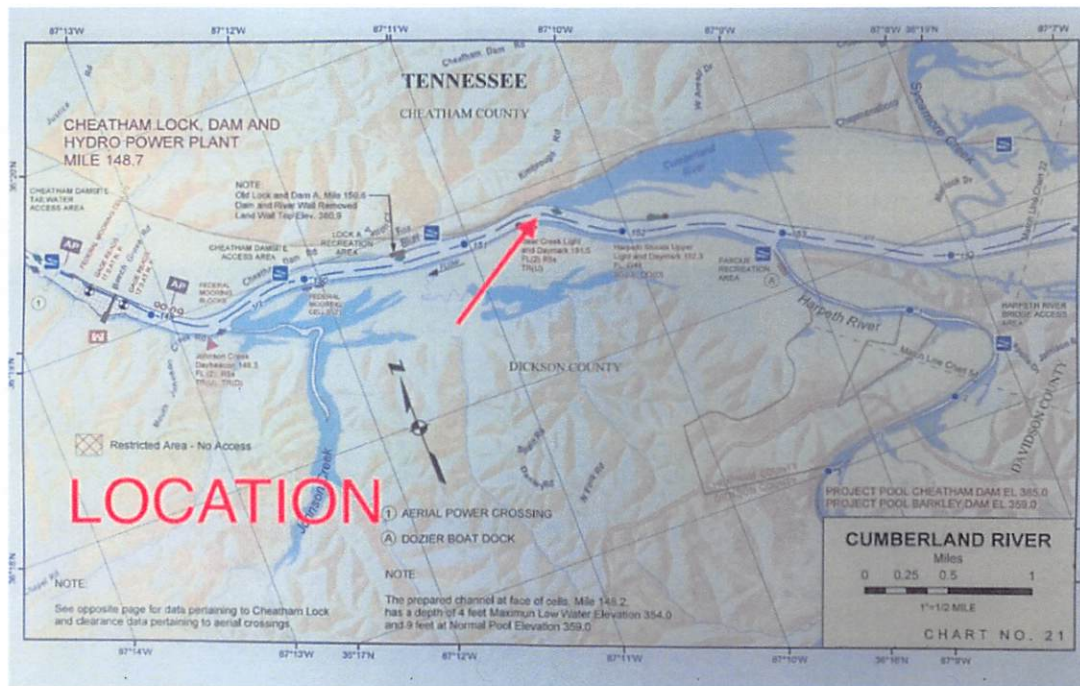


Figure 7: Location of incident (ACOE Cumberland River Chart) (September 14, 2023/USCG)

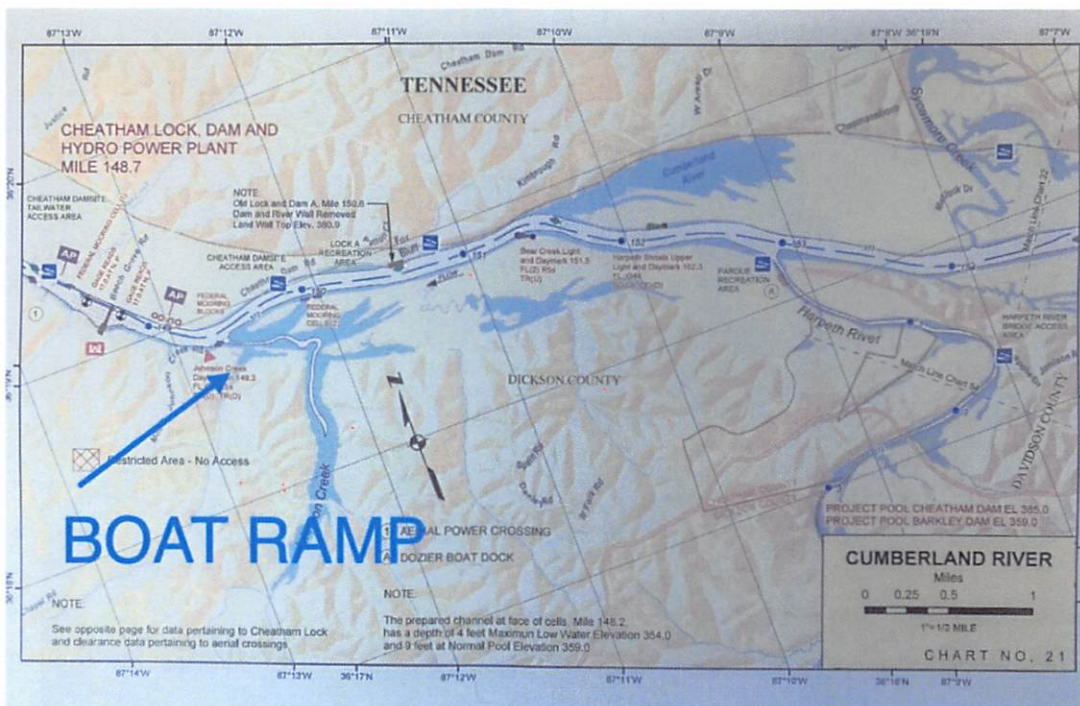


Figure 8: Location of Mouth of Johnson Creek Road Boat Ramp (ACOE Cumberland River Chart) (September 14, 2023/USCG)

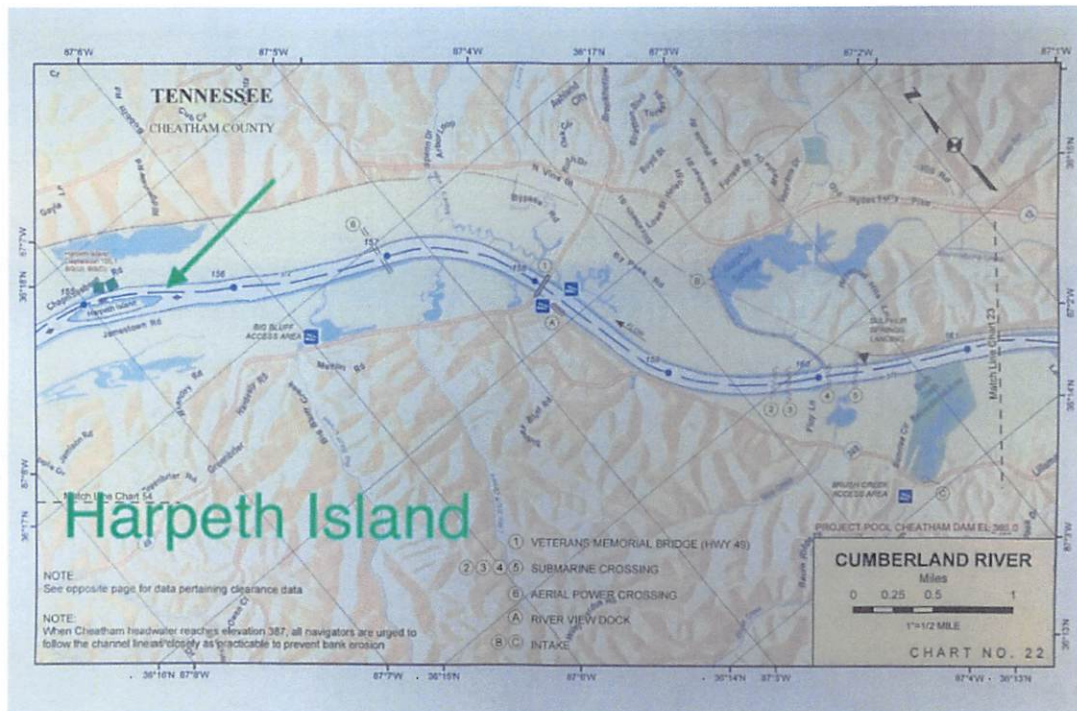


Figure 9: Location of Harpeth Island (ACOE Cumberland River Chart) (September 14, 2023/USCG)

Owner/Operator TN4176TB

4.2.18. The Owner/Operator purchased the personal watercraft (jet-ski) in 2021. According to statements from family, the operator was very familiar with the jet ski. Routine maintenance was up to date and jet ski had no known mechanical issues.

4.2.19. According to statements from the family, the operator was very familiar with that area of the river and had frequented Harpeth Island many times.

Hines Furlong Line

4.2.20. The Master on duty the night of the incident had been employed by Hines Furlong Line for approximately 18 years. He has held a Coast Guard Merchant Mariners Credential (MMC) endorsed as a Master of Towing Vessels Upon Western Rivers, for 10 years.

Regulatory Framework

4.2.21. The Inland Navigation Rules Act of 1980, (Public Law 96-591/33 CFR 83) established a consistent way to navigate safely and avoid collisions when two vessels are crossing paths, are on a course to meet head-on, or when one boat wishes to overtake another.

4.2.22. Both vessels were subject to the Inland Navigational Rules of the Road at the time of the incident because both vessels were underway on inland waters.

5. Analysis

5.1. *Physiological effects of alcohol.* The investigation revealed through postmortem toxicology testing that alcohol was found in the deceased operators system. The blood alcohol concentration (BAC) of the operator was found to be 0.240, three times the legal limit of the State of Tennessee and in violation of federal regulation. Vitreous fluid samples were taken and found to be positive for ethanol at a level of 252 milligrams per deciliter (mg/dl). The Medical Examiner stated that the body of the operator presented no signs of decomposition at the time of autopsy that may have contributed to the ethanol present. In addition, the Medical Examiner stated that vitreous fluid lags behind blood, meaning the vitreous fluid showed the bodies levels of ethanol before being metabolized by the liver. This information offers that the operators BAC had been higher than .240 and was on the decline at the time of death. Alcohol is a central nervous system depressant and can cause effects such as impaired judgement, reduced alertness, and impaired muscular coordination.

5.2. *Physiological effects of marijuana.* The investigation revealed through postmortem toxicology testing that marijuana metabolites were found in the deceased operators system. 11-Hydroxy Delta-9 THC has a reporting limit of 1.0 nanograms per milliliter (ng/mL) and was found with a result of 1.0 ng/mL. 11-Hydroxy Delta-9 THC is an active metabolite and is detectable in blood, with a 0.5 ng/mL cutoff, for 1.5 hours when cannabis is smoked by occasional users. Delta-9 Carboxy THC has a reporting limit of 5.0 ng/mL and was found with a result of 14 ng/mL. Delta-9 Carboxy THC is an inactive metabolite and is detectable in blood. The usual peak concentrations in serum for 1.75% or 3.55% THC marijuana cigarettes are 10-101 ng/mL attained 32-240 minutes after smoking, with a slow decline thereafter. Delta-9 THC has a reporting limit of 0.50 ng/mL and was found with a result of 7.4 ng/mL. Delta-9 THC is an active ingredient of marijuana and is detectable in blood. After smoking a user preferred dose, THC concentrations at 35 minutes were reported at an average of 16.1 ng/mL and decline to an average of 1.5 ng/mL after 190 minutes. In addition, Delta-9 THC is the principle psychoactive ingredient of marijuana. Marijuana use causes relaxation, distorted perception, euphoria, and feelings of well-being, along with confusion, dizziness, somnolence, ataxia, speech difficulties, lethargy and muscle weakness. The Medical Examiner stated that the operator most likely had smoked a marijuana cigarette at some point in the two hours prior to death.

5.3. *Twilight on the waterway.* The investigation revealed that sunset was at 1905 and twilight occurred at 1931 which was 5 minutes after the collision. TWRA officers re-enacted the route the jet-ski most likely took on the evening after the casualty. The trees on the right descending bank added to the darkness falling on the river by creating shadows. In addition, the tow was initiating a course change to starboard, by hugging the right descending bank, thereby placing most of the tow in the shadows created by the trees.

6. Conclusions

6.1. Determination of Cause:

6.1.1. The initiating event was the collision between TN4176TB and the center lead barge, AGS-245-B, in tow by the WARREN W HINES. The causal factors contributing to this event were:

6.1.1.1. The operator of TN4176TB being under the influence of alcohol and marijuana.

6.1.1.2. Twilight on the waterway.

6.1.2. The first subsequent event was the death of the operator and passenger onboard the jet-ski, TN4176TB. The causal factor contributing to this event was:

6.1.2.1. Fatal blunt force trauma sustained during the impact with the starboard lead barge, AGS-245-B.

6.1.3. The second subsequent event was the collision between TN4176TB and PBM-406. The causal factor contributing to this event was:

6.1.3.1. TN4176TB retained momentum following the impact with the barge AGS-245-B. The deflected momentum redirected TN4176TB into the bow of the barge PBM-406.

6.1.4. The final event was the sinking of the jet-ski, TN4176TB. The causal factor contributing to this event was:

6.1.4.1. TN4176TB sustained catastrophic damage that negatively affected the vessels stability, watertight integrity and buoyancy. The impact resulted in separation of the vessels hull and deck.

6.2. Evidence of Act(s) or Violation(s) of Law by Any Coast Guard Credentialed Mariner Subject to Action under 46 USC Chapter 77: None.

6.3. Evidence of Act(s) or Violation(s) of Law by U.S. Coast Guard Personnel, or any other person:

6.3.1. The Owner/Operator of TN4176TB failed to maintain a proper look-out in accordance with Title 33 Code of Federal Regulations Part 83.05

6.3.2. The Owner/Operator of TN4176TB failed to maintain a safe speed in accordance with Title 33 Code of Federal Regulations Part 83.06

6.3.3. The Owner/Operator of TN4176TB failed to take action to avoid collision in accordance with Title 33 Code of Federal Regulations Part 83.08.

6.3.4. The Owner/Operator of TN4176TB failed to remain to the outer limit of the channel that lies on the vessels starboard side in accordance with Title 33 Code of Federal Regulations Part 83.09(a)(i).

6.3.5. The Owner/Operator of TN4176TB impeded the passage of a vessel capable of only navigating within a narrow channel or fairway in violation of Title 33 Code of Federal Regulations Part 83.09(b).

6.3.6. The Owner/Operator of TN4176TB was operating a power-driven vessel between the hours of sunset and sunrise without required navigational lighting in violation of Title 33 Code of Federal Regulations Part 83.23.

6.3.7. The Owner/Operator of TN4176TB was under the influence of alcohol and THC in violation of Title 33 Code of Federal Regulations Part 95.020 and Part 95.030.

6.3.8. The Owner/Operator of TN4176TB was operating a personal watercraft between the hours of sunset and sunrise in violation of the State of Tennessee Statute 1660-02-10.01(3).

6.3 Evidence of Act(s) Subject to Civil Penalty: None.

6.4. Evidence of Criminal Act(s): None

6.5. Need for New or Amended U.S. Law or Regulation: None.

6.6. Unsafe Actions or Conditions that Were Not Causal Factors: None.

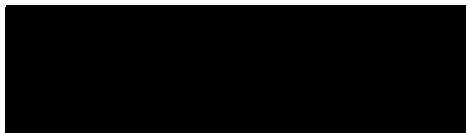
7. Actions Taken Since the Incident

7.3. None.

8. Recommendations

8.3. Safety Recommendation: There were no proposed actions to add new or amend existing U.S. law or regulations, international requirements, industry standards, or U.S. Coast Guard policies and procedures as part of this investigation.

8.4. Administrative Recommendations: Recommend this investigation be closed.



CWO, U.S. Coast Guard
Investigating Officer