



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: August 4, 2006

In reply refer to: M-06-16 and -17

Honorable George E. Pataki
Governor
State of New York
State Capitol
Albany, New York 12224

The National Transportation Safety Board (Safety Board) is an independent Federal agency charged by Congress with investigating transportation accidents, determining their probable cause, and making recommendations to prevent similar accidents from occurring. We urge you to take action on the safety recommendations in this letter. The Safety Board is vitally interested in these recommendations because they are designed to prevent accidents and save lives.

The recommendations address the need for New York State to discontinue its practice of using capacity plate data to determine passenger loading on public vessels that carry more than six passengers and to issue technical guidance on a number of matters to public vessel owners. The recommendations are derived from the Safety Board's investigation of the fatal accident involving the New York State-certificated public vessel *Ethan Allen* on October 2, 2005, and are consistent with the evidence we found and the analysis we performed.¹ The Safety Board would appreciate a response from you within 90 days addressing actions you have taken or intend to take to implement the recommendations.

On the afternoon of October 2, 2005, the New York State-certificated public vessel *Ethan Allen*, with a State-licensed operator and 47 passengers on board, departed the marina at Lake George, New York, for a narrated cruise of the lake. About 20 minutes into the cruise, as the operator was maneuvering around Cramer's Point, a wave or waves generated by one or more vessels impacted the *Ethan Allen* on its starboard side. The *Ethan Allen* rolled to port and overturned within a few seconds. Operators of recreational vessels nearby observed the accident, proceeded immediately to the site, and began rescuing survivors. Twenty passengers died, three passengers received serious injuries, and six passengers received minor injuries in the accident. The vessel operator and 18 passengers survived without injury.

¹ For additional information, read National Transportation Safety Board, *Capsizing of New York State-Certificated Public Vessel Ethan Allen, Lake George, New York, October 2, 2005*, Marine Accident Report NTSB/MAR-06/03 (Washington, D.C., 2006).

The National Transportation Safety Board determined that the probable cause of the capsizing of the *Ethan Allen* was the vessel's insufficient stability to resist the combined forces of a passing wave or waves, a sharp turn, and the resulting involuntary shift of passengers to the port side of the vessel. The vessel's stability was insufficient because it carried 48 persons where postaccident stability calculations demonstrated that it should have been permitted to carry only 14 persons. Contributing to the cause of the accident was the failure to reassess the vessel's stability after it had been modified because there was no clear requirement to do so. The Board's accident investigation found that the stability characteristics of the *Ethan Allen* had been changed throughout its history by the addition and modification of various canopy structures, and that because the vessel did not undergo a stability assessment after the addition or modification of each canopy, it was certificated to carry too many passengers.

Following this accident, on March 2, 2006, you proposed legislation to strengthen the State's regulations governing public vessels. In the area of stability, the proposed legislation included increasing the State passenger weight criterion to 174 pounds. The weight standard proposed by New York is based on a Federal Aviation Administration (FAA) weight standard identified in a safety recommendation (M-04-4) that the Safety Board issued to the U. S. Coast Guard in advance of the Board's final report on the 2004 *Lady D* capsizing in Baltimore Harbor. The specific weight value adopted by the FAA in 2004 was based on information available at that time.²

New York's proposed legislation to update the passenger weight criterion is a positive step toward ensuring that a vessel is properly certificated for the number of passengers it can safely carry. However, as current studies and sources show, weight is a variable that is subject to change. The Coast Guard has recommended that the passenger weight standard used in evaluating vessel stability be 185 pounds based on 2005 CDC studies.³ The Safety Board has asked the Coast Guard to periodically review national studies and update the weight standard as necessary. The Board suggests that New York monitor the regulatory changes made by the Coast Guard and update its State regulations accordingly.

In the course of its investigation, the Safety Board found that New York State public vessels are not required to have a simple and ready means such as a mark on the hull by which operators can determine whether their vessels are overloaded. Even if the number of passengers permitted is based on an increased average weight standard, the problem persists that a vessel can become overloaded if many of the passengers on board are heavier than the standard weight. Operators need an easy way of identifying whether the passenger load they are preparing to carry will overload their vessels. If a mark is painted on the hull that corresponds to the waterline when the vessel is under maximum approved load, any crewmember can easily determine whether the vessel is overloaded simply by observing the vessel's draft in relation to that mark.

² In October 2004, the Centers for Disease Control and Prevention (CDC) issued the report, "Mean Body Weight, Height, and Body Mass Index, United States 1960–2002," based on data collected annually since 1960 by the CDC's National Health and Nutrition Examination Survey program.

³ *Federal Register*, vol. 71, no. 80 (April 26, 2006), pp. 24732-24735.

The regulatory changes you proposed also addresses other issues that were not causal to the capsizing. The Safety Board supports the quick enactment of the proposed legislation, including the following changes:

- Law enforcement officials must immediately test operators of public vessels that have been involved in an accident causing death, disappearance, or serious physical injury for alcohol or drug use before the accident.
- Public vessel operators must provide passengers with pretrip verbal safety briefings that include descriptions of the use and location of personal flotation devices and other safety equipment.
- Public vessels certified to carry 20 or more passengers must be equipped with at least two means of exit on each deck.
- Public vessels must not be operated with fewer than the required number of crewmembers specified in the certificate of inspection or temporary permit.
- Owners must inform the State before modifying vessels in a way that would affect the stability of the vessel.

The Safety Board notes the timely efforts that New York State is taking to make regulatory changes related to stability, passenger carriage, postaccident toxicological testing, and manning. If adopted, the proposed changes should ensure a higher level of safety for passengers on public vessels. Once the regulatory changes are enacted, owners and operators need to promptly receive guidance on the new rules.

In researching the number and passenger carriage of New York's public vessels, the Safety Board determined that State officials used manufacturers' capacity plates to establish the number of passengers permitted on 382 of the 447 public vessels. Of the 382 public vessels with capacity plates, 125 carried more than six passengers for hire.

The capacity plate standard, found in 33 *Code of Federal Regulations* Part 183, requires boat manufacturers to rate the total number of persons their boats can safely carry. The standard specifically applies to noncommercial vessels under 20 feet in length and is not intended to be applied to a commercial passenger vessel carrying more than six passengers for hire. The Coast Guard requires that any commercial passenger vessel carrying more than six passengers be inspected according to the small passenger vessel regulations found in 46 CFR Subchapter T. New York State's reliance on manufacturers' capacity plate data to determine passenger limits on public vessels that carry more than six passengers for hire is an inappropriate use of the Coast Guard noncommercial boat standard.

In summary, the Safety Board makes the following safety recommendations to New York State:

Address safety deficiencies identified in the investigation of the *Ethan Allen* accident and issue technical guidance to vessel owners on inspection

requirements for modified vessels, stability assessments and criteria, means for determining maximum safe load condition, drug and alcohol testing, manning, and safety briefings. (M-06-16)

Discontinue the use of capacity plate data associated with the U.S. Coast Guard's noncommercial boating standards for determining passenger loading on public vessels that carry more than six passengers and adopt the Coast Guard small passenger vessel inspection standards. (M-06-17)

We urge you to take action on the safety recommendations in this letter. Please refer to Safety Recommendations M-06-16 and -17 in your reply. If you need additional information, you may call (202) 314-6174.

Acting Chairman ROSENKER and Members HERSMAN and HIGGINS concurred with these recommendations.

[Original Signed]

By: Mark V. Rosenker
Acting Chairman