



TSB Recommendation M16-05

Wearing of suitable PFDs at all times while on the deck of a fishing vessel

The Transportation Safety Board of Canada recommends that the Department of Transport require persons to wear suitable personal flotation devices at all times when on the deck of a commercial fishing vessel or when on board a commercial fishing vessel without a deck or deck structure and that the Department of Transport ensure programs are developed to confirm compliance.

Marine transportation safety investigation report	M15P0286
Date the recommendation was issued	14 December 2016
Date of the latest response	December 2023
Date of the latest assessment	February 2024
Rating of the latest response	Satisfactory in Part
File status	Active

Summary of the occurrence

On 5 September 2015, the fishing vessel *Caledonian* capsized 20 nautical miles west of Nootka Sound, British Columbia. At the time, the vessel was trawling for hake with 4 crew members on board. Following the capsizing, the master and mate climbed onto the overturned hull and remained there for several hours. When the vessel eventually sank, the master and mate abandoned it, and the mate swam toward and boarded the life raft. The Canadian Coast Guard subsequently rescued the mate and recovered the bodies of the master and the 2 other crew members.

The Board concluded its investigation and released report M15P0286 on 14 December 2016.

Rationale for the recommendation

Fishermen often operate in harsh physical and environmental conditions. They harvest, load, transfer, and store their catch while the vessel is in various sea conditions, and the risk of going overboard is high. If a fisherman ends up in the water, the consequences can be fatal. The Safety Issues Investigation identified falling overboard as the second highest cause of death in the fishing industry. In British Columbia, since 2006, the TSB has determined that approximately 70% of all fishing-related fatalities result from not using a personal flotation device (PFD).

TSB investigations have shown that wearing a PFD increases the chance of surviving a man overboard situation, and this occurrence is yet another example, where the mate, who was the only one wearing a PFD, survived.

In February 2012, the Commission de la santé et de la sécurité du travail (CSST) made it compulsory for lobster fishermen to wear PFDs at all times. Recently, the CSST has sent letters to all masters on lobster fishing vessels explaining the regulation as it pertains to the mandatory use of lifejackets or PFDs on board fishing vessels and the CSST has conducted 150 vessel visits to ensure compliance.

Apart from the CSST, neither TC nor any other provincial workplace safety regulator has requirements to ensure that fishermen wear PFDs at all times. Those requirements that do exist place the onus on fishing vessel masters to determine whether or not a risk is present and to decide if PFDs should be worn. Not only is this assessment of risk subjective, but it also assumes that crew members are in a position to recognize when risk is present and have the time available to don a PFD or other flotation device.

Despite risk-based regulations and industry initiatives to change behaviours and create awareness about the importance of wearing PFDs, as well as design improvements by PFD manufacturers to address fishermen's concerns about comfort and constant wear, there has not been a significant change in the behaviour of fishermen and many continue to work on deck without wearing a PFD.

The TSB believes that the implementation of explicit requirements for fishermen to wear PFDs, along with appropriate education and enforcement measures, will significantly reduce the loss of life associated with going overboard. The Board therefore recommended that

the Department of Transport require persons to wear suitable personal flotation devices at all times when on the deck of a commercial fishing vessel or when on board a commercial fishing vessel without a deck or deck structure and that the Department of Transport ensure programs are developed to confirm compliance.

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Previous responses and assessments

March 2017: response from Transport Canada

Transport Canada (TC) disagrees with the recommendation to have prescriptive regulatory requirements for persons to wear personal flotation devices, and disagrees with the recommendation to have programs developed to ensure compliance.

TC promotes and encourages the wearing of personal flotation devices (PFDs) or lifejackets through educational initiatives to increase awareness of their importance in reducing loss of life, and through continuing to work with stakeholders and industry on new standards for more wearable flotation devices. Such initiatives include:

- Promoting and supporting innovative performance based standards for more wearable lifejackets. This initiative began with the development of the Canadian Lifejacket Standard, CGSB 65.7-2007, and continues with TC's support of the new bi-national North American lifejacket standard, UL-12402, which will include increased design options for manufacturers to provide more comfortable and wearable devices.
- Ship Safety Bulletin 06/2012, *Wearing and Using Flotation Devices, Small Non-Pleasure Craft & Small Commercial Fishing Vessels* which allows, in certain situations, the use of more wearable flotation devices in lieu of traditional lifejackets designed for ship abandonment. The Ship Safety Bulletin requires that where this option is used, personal flotation devices must be worn by crew on deck at all times.

TC has consulted extensively with the fishing industry and has determined that education and awareness on the wearing of PFD or lifejackets is the most effective approach and will result in a reduction of fatalities.

The TC compliance and inspection regime is established to verify regulatory compliance while vessels are in port. Only seafarers themselves can ensure compliance while vessels are at sea. It is the Authorized Representative's (AR) responsibility to develop safe operating procedures and confirm compliance on board the vessel. The new *Fishing Vessel Safety Regulations* require that no person shall operate, or permit another person to operate, a fishing vessel in environmental conditions or circumstances that could jeopardize the safety of persons onboard unless a lifejacket or PFD is worn by all persons onboard, in the case of fishing vessel that has no deck or deck structure, or by all persons on the deck or in the cockpit, in the case of a fishing vessel that has a deck or deck structure.

July 2017: TSB assessment of the response (Unsatisfactory)

Transport Canada does not agree with this recommendation, suggesting that a requirement to wear a PFD at all times could not be enforced by TC and that only seafarers themselves can ensure compliance. Further, TC's response focuses on actions already taken to promote and encourage educational initiatives to increase awareness of the importance of wearing a PFD and on its continued work with stakeholders and industry regarding new standards for more wearable flotation devices.

Since 2007 there have been 99 fishing-related fatalities; approximately 80% of those fatalities resulted from fishermen ending up in the water for a number of reasons including falling overboard and stability issues. The TSB has not seen an improvement in fishing-related fatalities when comparing the two five-year periods, from 2007 to 2011 and 2012 to 2016. Therefore, despite TC's risk-based requirement to wear a PFD for operations on a fishing vessel, initiatives to change behaviour, and recent PFD design improvements, the TSB is concerned that there has not been a significant change in the behaviour of fishermen and many continue to work on deck without wearing a PFD.

The TSB is aware that TC's compliance and inspection regime was established to verify regulatory compliance while vessels are in port, however there may be other means to ensure or verify compliance. This may include TC's engagement with other federal or provincial agencies that conduct at sea inspections, such as WorkSafeBC.

Therefore, the response to the recommendation is considered to be **Unsatisfactory**.

March 2018: response from Transport Canada

Transport Canada (TC) agrees in principle with the recommendation.

The new *Fishing Vessel Safety Regulations* require that no person shall operate, or permit another person to operate, a fishing vessel in environmental conditions or circumstances that could jeopardize the safety of persons onboard unless a lifejacket or PFD is worn by all persons onboard, in the case of a fishing vessel that has no deck or deck structure, or by all persons on the deck or in the cockpit, in the case of a fishing vessel that has a deck or deck structure.

The current TC compliance and inspection regime is limited to verifying regulatory compliance while vessels are in port. Authorized Representatives (AR) also have a responsibility to develop safe operating procedures and to confirm compliance onboard the vessel. Therefore, TC will consider the feasibility of alternative options for compliance such as delegating to other departments / agencies who interact with vessels on the water; creating a requirement for operators to do spot checks and/or audits to demonstrate compliance. The review will be completed by March 2020.

In the meantime, TC will continue educational and awareness efforts to encourage compliance. TC promotes and encourages the wearing of personal flotation devices (PFDs) or lifejackets through educational initiatives to increase awareness of their importance in reducing loss of life, and through continuing to work with stakeholders and industry on new standards for more wearable flotation devices. Such initiatives include:

- Promoting and supporting innovative performance based standards for more wearable lifejackets. This initiative began with the development of the Canadian Lifejacket Standard, CGSB 65.7-2007, and continues with TC's support of the new bi-national North American lifejacket standard, UL-12402, which will include increased design options for manufacturers to provide more comfortable and wearable devices.
- Ship Safety Bulletin 06/20 12, Wearing and Using Flotation Devices, Small Non-Pleasure Craft & Small Commercial Fishing Vessels which allows, in certain situations, the use of more wearable flotation devices in lieu of traditional lifejackets designed for ship abandonment. The Ship Safety Bulletin requires that, where this option is used, personal flotation devices must be worn by crew on deck at all times.

March 2018: TSB assessment of the response (Satisfactory Intent)

Transport Canada agrees in principle with this recommendation. The TSB is encouraged by TC's commitment to undertake a review of alternative options for verifying compliance with PFD usage, the continued focus on educational initiatives, and its continued work with stakeholders and industry regarding new standards for more wearable flotation devices.

However, TC's feasibility review of alternative options for verifying compliance is not due for completion until March 2020. Until this review is completed and a plan is put in place to ensure compliance, it is too early to determine to what extent the proposed actions will address the risk. Therefore, the Board considers the response to the recommendation to show **Satisfactory Intent**.

January 2019: response from Transport Canada

Transport Canada (TC) agrees in principle with the recommendation. TC is continuing educational and awareness efforts to encourage compliance with the new *Fishing Vessel Safety Regulations* (FVSR).

TC promotes and encourages the wearing of personal flotation devices (PFDs) or lifejackets through educational initiatives to increase awareness of their importance in reducing loss of life, and through continuing to work with stakeholders and industry on new standards for more wearable flotation devices. Such initiatives include promoting and supporting innovative performance-based standards for more wearable lifejackets. This initiative began with the development of the Canadian Lifejacket Standard, CGSB 65.7-2007 and continues with TC's acceptance of certain devices manufactured in accordance with the new bi-national North American lifejacket standard, UL-12402, which includes increased design options for manufacturers to provide more comfortable and wearable devices.

To support the use of modern and wearable PFDs and help increase their availability on the market, TC has signed a Memorandum of Understanding (MOU) with the United States Coast Guard (USCG) for mutual acceptance of PFDs under the new bi-national standards (http://www.tc.gc.ca/eng/marinesafety/Memorandum_of_understanding_approval_personal_lifesaving_appliances.html).

March 2019: TSB assessment of the response (Satisfactory in Part)

The Board appreciates that TC is promoting the wearing of personal flotation devices (PFDs) through educational initiatives and is continuing to work with stakeholders and industry on new standards for more wearable lifejackets.

However, the Board notes the lack of a regulatory requirement for persons to wear a suitable PFD at all times when on the deck of a commercial fishing vessel, and the lack of an update to the review of alternative options for verifying compliance that TC referenced in its 2018 response.

In BC, in response to a similar TSB recommendation addressed to WorkSafeBC (M16-04), the Board at WorkSafeBC recently approved a regulatory amendment that will require fishermen in BC to wear a PFD while working on a fishing vessel. WorkSafeBC has also planned an enforcement strategy to ensure compliance with the new regulatory requirements. The progress made by WorkSafeBC is encouraging, but only applies within the province.

Until a regulatory requirement is in place to ensure that persons wear a suitable PFD at all times when on the deck of a commercial fishing vessel, and that programs are developed to confirm compliance, the risk of loss of life associated with going overboard will remain.

The Board considers the response to the recommendation to be **Satisfactory in Part**.

January 2020: response from Transport Canada

Transport Canada (TC) agrees with the recommendation.

TC is continuing educational and awareness efforts to encourage compliance with the new *Fishing Vessel Safety Regulations* (FVSR) and will continue to assess the effectiveness of the FVSR performance requirement to wear a lifejacket or a PFD in situations that could jeopardize the safety of persons.

TC also supports education and awareness campaigns by provincial and industry initiatives, such as WorkSafeBC, Fish Safe BC, WCB Nova Scotia, CNESST in Quebec and the Quebec Standing Committee on Fishing Vessel Safety.

March 2020: TSB assessment of the response (Satisfactory in Part)

Transport Canada (TC) is continuing educational and awareness efforts to encourage compliance with the *Fishing Vessel Safety Regulations*. However, the Board notes the lack of a regulatory requirement for persons to wear a suitable PFD at all times when on the deck of a commercial fishing vessel, and the lack of an update to the review of alternative options for verifying compliance that TC referenced in its 2018 response.

Until a regulatory requirement is in place to ensure that persons wear a suitable PFD at all times when on the deck of a commercial fishing vessel, and that programs are developed to confirm compliance, the risk of loss of life associated with going overboard will remain.

The Board considers the response to the recommendation to be **Satisfactory in Part**.

February 2021: response from Transport Canada

Transport Canada agrees with this recommendation. Transport Canada is continuing educational and awareness efforts to encourage compliance with the new *Fishing Vessel Safety Regulations* and will continue to assess the effectiveness of the *Fishing Vessel Safety Regulations'* performance requirement to wear a lifejacket or a personal floatation device (PFD) in situations that could jeopardize the safety of persons.

Transport Canada is also supporting education and awareness campaigns by both provinces and industry, including those initiatives by WorkSafeBC, Fish Safe BC, WCB Nova Scotia, CNESST in Quebec.

March 2021: TSB assessment of the response (unable to assess)

Transport Canada (TC) is continuing educational and awareness efforts to encourage compliance with the *Fishing Vessel Safety Regulations* and is supporting similar campaigns in various provinces.

The Board is encouraged that TC is continuing its educational and awareness efforts, but is concerned that this is the only approach the department is currently taking. Since the Board published Recommendation M16-05 in December of 2016, TC has not indicated if the department is taking any concrete steps in implementing regulations that would require fish harvesters to wear PFDs on the deck of fishing vessels at all times. Investigations by the TSB continue to show that wearing a lifejacket or a suitable PFD while on deck significantly enhances survivability of fish harvesters who may end up in the water. Since the Board made recommendation M16-05 in 2016, the TSB has released four reports that identified not wearing a suitable PFD while onboard a fishing vessel was a factor in the loss of life (M20A0258, M18A0303, M18A0078, and M18A0076).

While there is a developing safety culture in the fishing industry, the lack of regulatory requirement to address this safety deficiency means that fish harvesters may continue to operate without wearing a PFD. This lack of a regulatory requirement for wearing PFDs leaves the determination of what constitutes a dangerous situation up to individuals; therefore, fish harvesters remain vulnerable to rapid changes in circumstances such as a sudden change in weather or equipment failure. In addition, not wearing a PFD leaves crew members without protection should they end up in the water.

Although TC's work in education and regulatory drafting is ongoing, its response does not provide any meaningful progress specific to Recommendation M16-05. Until a regulatory requirement is in place to ensure that persons wear a lifejacket or a suitable PFD at all times when on the deck of a commercial fishing vessel, and that programs are developed to confirm compliance, the risk of loss of life associated with going overboard will remain.

Therefore, the Board is **unable to assess** the response to Recommendation M16-05.

December 2021: response from Transport Canada

Transport Canada agrees with this recommendation. Transport Canada notes the Transportation Safety Board's March 2021 comment stating that no concrete steps in implementing regulations that would require fish harvesters to wear PFDs on the deck of fishing vessels at all times have been taken. TC is continuing educational and awareness efforts to encourage compliance with the new *Fishing Vessel Safety Regulations* and will continue to assess the effectiveness of the *Fishing Vessel Safety Regulations'* performance requirement to wear a lifejacket or a personal floatation device (PFD) in situations that could jeopardize the safety of persons.

Transport Canada is still supporting education and awareness campaigns by both provinces and industry, including those initiatives by WorkSafeBC, WCB Nova Scotia, CNESST in Quebec.

March 2022: TSB assessment of the response (Unsatisfactory)

Transport Canada's (TC) response indicates that it supports the recommendation and continues its educational and awareness efforts to encourage compliance with the new *Fishing Vessel Safety Regulations* (FVSR) and it will continue to assess the effectiveness of the FVSR. However, the Board is concerned that TC's efforts are not sufficient in addressing the safety deficiency identified by this recommendation.

While there is a developing safety culture in the fishing industry, the lack of regulatory requirement to address this safety deficiency means that fish harvesters may continue to operate without wearing a PFD. This lack of a regulatory requirement for wearing PFDs leaves the determination of what constitutes a dangerous situation up to individuals; therefore, fish harvesters remain vulnerable to rapid changes in circumstances such as a sudden change in weather or equipment failure. In addition, not wearing a PFD leaves crew members without protection should they end up in the water.

The Board notes that TC continues to support education and awareness campaigns carried out by provinces and industry. Given the size of the commercial fishing fleet in Canada, the Board acknowledges that cooperative efforts may be effective in advancing a safety culture.

However, until a regulatory requirement is in place to ensure that persons wear a suitable PFD at all times when on the deck of a commercial fishing vessel, and that programs are developed to confirm compliance, the risk of loss of life associated with going overboard will remain.

Therefore, the Board considers the response to Recommendation M16-05 to be **Unsatisfactory**.

December 2022: response from Transport Canada

The non-wearing of personal flotation devices on board commercial vessels is a long-standing safety issue that is pervasive in the international fishing industry. At the recent Implementation of International Maritime Organization Instruments Sub-committee, Session 8, the report of the Working Group on Lessons Learned and Safety Issues Identified from the Analysis of Marine Safety Investigation Reports noted that “the attitude within the fishing industry concerning personal flotation devices (PFDs) needs to be changed in order to increase the use of PFDs as essential for survival” and referred the matter to other sub-committees for discussion and consideration. Transport Canada looks forward to the opportunities to work with other IMO Member States to address this issue in the work of IMO Sub-committees in the near and long term.¹

Transport Canada views the wearing of PFDs by commercial fishers in all circumstances as requiring a shift in safety culture in the fishing industry. Transport Canada is supportive of the workplace education and awareness campaigns by both provinces and the fishing industry, including those initiatives by WorkSafeBC, WCB Nova Scotia, Fish Harvesters Association of Newfoundland and Labrador, and CNESST in Quebec. Transport Canada is working with DFO promoting enrollment in Small Vessel Compliance Program – Fishing (SCVP-F) through a targeted campaign whereby vessels in receipt of fishing licenses receive an information postcard promoting enrollment in SVCP-F. TC has initiated the development of the Fishing Vessel Safety Guide for small fishing vessels aimed to promote and strengthen safety culture for the fishing industry. This guide will consolidate key safety and regulatory information from various sources (i.e., TC, DFO, CCG & fishing associations and organizations) and provide guidance to fishing vessel owners and fishers on their regulatory obligations as well as best practices, which would include the importance of wearing a PFD at all times.

TC is taking specific aim at reducing risk of falling overboard in the first place through regulatory provisions in the Phase 2 *Fishing Vessel Regulations* currently in [the] drafting stage. These primary prevention provisions address:

¹ All responses are those of the stakeholders to the TSB in written communications and are reproduced in full. The TSB corrects typographical errors and accessibility issues in the material it reproduces without indication but uses brackets [] to show other changes or to show that part of the response was omitted because it was not pertinent.

- for vessels with exposed decks, mandatory wearing of PFDs unless there are guard rails of a specific height
- use of harness for specific activities
- use of non-skid paint on decks

In response to a request by the TSB for further information, TC sent the following information on 02 February 2023: The risk of falling overboard was evaluated from consultation with industry, and the Transportation Safety Board's marine transportation occurrences dataset, recommendations, and investigation reports as part of the preparation for the drafting of the *Fishing Vessel Safety Regulations* (Phase 2). This assessment is currently being integrated into the documentation being prepared for [the] Treasury Board Submission for these regulations.

March 2023: TSB assessment of the response (Satisfactory in Part)

Transport Canada's (TC) response indicates its support of the workplace education and awareness campaigns by various provinces and the fishing industry, but views the wearing of PFDs while aboard in all circumstances as requiring a shift in safety culture in the fishing industry. TC now indicates that it will take steps to address the risk of falling overboard through regulatory provisions in Phase 2 of the *Fishing Vessel Regulations* (FVR). These provisions would include mandatory wearing of PFDs on fishing vessels with exposed decks, unless there are guard rails of a specific height, the use of a harness for specific activities and the use of non-skid paint on decks.

The Board is encouraged by the steps taken by TC to incorporate provisions addressing the risk of falling overboard, including increased requirements for the wearing of PFDs in the next phase of the FVR. However, the proposed actions do not address the risk from sudden capsizing or sinking. The TSB will review the proposed regulations once they are pre-published in the *Canada Gazette*, Part I and evaluate the residual risk remaining in relation to the underlying safety deficiency.

Therefore, the Board considers the response to Recommendation M16-05 to be **Satisfactory in Part**.

Latest response and assessment

December 2023: response from Transport Canada

Transport Canada (TC) continues to focus its efforts on education and awareness campaigns, as well as continuing its efforts outlined in its fall 2022 response to TSB to address the safety issues raised in M16-05. This work is seen as one of the most effective means for encouraging positive change in attitudes towards the wearing of personal flotation devices, in addition to encouraging compliance with the *Fishing Vessel Safety Regulations* (FVSR).

TC continued its work in this regard through its Concentrated Inspection Campaign (CIC) over the May to September 2023 period. The CIC focused on the safe operation of vessels, and for fishing vessels in particular, TC included a question that focused specifically on lifejacket/PFD

wearing while working onboard (as per Section 3.09 of the *Fishing Vessel Safety Regulations*²) and the related verification of:

- the master's awareness of the requirement to have the crew wear PFDs while the fishing vessel is in operation; and
- the crew's awareness of the requirement and confirmation that they wear the PFD while the vessel is in operation.

TC will use the information collected during the CIC to further develop outreach material aimed at increasing the use of PFDs.

The publication of Phase 2 of the FVSR and the related implementation remain a top priority for the department. TC is confident that the new provisions will help reduce the risk of falling overboard, and further enhance safety culture of the commercial fishing industry. In addition, Phase 2 includes major enhancements of construction requirements for fishing vessels <24 metres, such as drainage and watertightness/weathertightness, which will mitigate the risk of falling overboard as well as the risk of capsizing/sinking and therefore mitigate the risk of falling overboard among these vessels in the future. Similarly, Phase 3 of the FVSR will also enhance construction requirements for the large fishing vessel fleet and contribute to the reduction of capsizing/sinking incidences among these large vessels.

February 2024: TSB assessment of the response (Satisfactory in Part)

Transport Canada's (TC) response highlights its continued support of workplace education and awareness campaigns to encourage the use of personal floatation devices (PFDs) and compliance with the *Fishing Vessel Safety Regulations* (FVSR). TC also conducted a Concentrated Inspection Campaign (CIC) that included specific questions and verification of life jacket/PFD use while working aboard. Further outreach material will be developed by TC using the information collected during the CIC. As per section 3.09 of the current FVSR, it is only required that a PFD be worn "in environmental conditions or circumstances that could jeopardize the safety of persons on board." However, TSB investigations have demonstrated that there are other circumstances, such as a sudden capsizes, that may lead to a person going overboard.

According to TC, the new provisions of Phase 2 and Phase 3 of the FVSR will enhance safety culture, reduce the risk of falling overboard, and include major enhancements of construction requirements for fishing vessels <24 metres, such as drainage and watertightness/weathertightness, which will contribute to a reduction of capsizing/sinking incidences.

The Board is encouraged by TC's continued support of education and awareness campaigns, and the proposal for future regulations that will include enhanced construction requirements to reduce the risk of falling overboard. However, the Board is concerned over the continuous delays to the publication schedule for Phase 2 of the FVSR and the remaining lack of a target

² https://laws.justice.gc.ca/eng/regulations/C.R.C.,_c._1486/page-2.html#h-521850

date for completion of Phase 3. The TSB will review the new provisions to the FVSR once they are pre-published in the *Canada Gazette*, Part I and evaluate the residual risk remaining in relation to the underlying safety deficiency.

Therefore, the Board considers the response to Recommendation M16-05 to be **Satisfactory in Part**.

File status

The TSB will monitor the progress made by TC. Further delays in publishing these regulations may warrant a change in rating.

This deficiency file is **Active**.