

US Sailing, Safety at Sea Committee
Results and Recommendations from our MOB Studies and the Rescue Testing Symposium

Version 7.1

This note covers the current state of thinking in Man Overboard rescue by US Sailing. This combines information and learning from many sources, including:

- The Man Overboard Symposium in June 2023, conducted by the US Sailing Safety-at-Sea Committee off Newport, RI by Renee Mehl, is the detailed report on the Symposium.¹
- The Study “Evaluating MOB Return and Recovery in the 21st Century”² evaluated over twenty-two actual MOB incidents, and had significant conclusions.
- Many trials of MOB rescues at Hands-on Training days, and in focused single-boat programs, as well as information about MOB rescue from foreign sailing organizations.³

The Need for the MOB Symposium included:

1. The last organized field trial of MOB Rescue was conducted in 2005⁴. Since then, new techniques and tools have been developed, with some significant changes.
2. After the findings in the study “Evaluating MOB Return and Recovery in the 21st Century” (York, et al paper²). A significant change was to recommend a Lifesling rescue whenever possible to avoid hitting the MOB with the hull.
3. Various techniques for return and rescue of an MOB with the Lifesling (and without) have evolved since that last study; sometimes the techniques conflicted. US Sailing needs to teach one or more specific methods (while referencing alternatives). Part of this symposium’s results allows us to update our training curriculum.
4. We wanted to study MOB techniques in conditions with more ocean waves and at night, as the vast majority of boat practice is not done in these conditions. This helps us refine how to rescue when visibility is an issue.
5. We wanted to begin experimenting with, and honing, techniques for recovery of an MOB who has such trauma that they cannot get into or stay in a Lifesling. US Sailing MOB rescue training is generally silent on these tactics. The results point to some promising techniques, but more work is needed here.

¹ Renee Mehl, et al. *US Sailing Safety at Sea Committee Crew Overboard (COB) Return and Rescue Trials 2023*
Location TBD

² York et al., *Study Evaluating MOB Return and Recovery in the 21st Century*. <https://www.ussailing.org/wp-content/uploads/2024/05/2020.New-Study-Evaluating-MOB-Return-and-Recovery-in-the-21st-Century.pdf>

³ Storm Trysail Foundation runs several hands-on training programs that include practice on the water in boats. These include their Junior Safety at Sea programs and the US Sailing Sanctioned programs in Western Long Island Sound and in Texas there have been over a thousand of practice MOB rescues at these programs. Similarly, Navy has hundreds of rigorous practices of MOB rescue both for their teams and to demonstrate MOB rescues at their hands-on days at US Sailing-Sanctioned training. We also collect information from racers and Organizing Authorities, especially when the OAs require MOB rescue training for entries. Similarly the Cruising Club of America and Sailing Foundation have programs practicing various MOB Rescues.

⁴ John Rousmaniere, *2005 Crew Overboard Rescue Symposium*

The results from the 2023 symposium were very good. They also point the way for further testing of additional skills and tools, especially for rescue of injured MOBs and night rescues. As with most things in seamanship, learning is never ending.

Please note: There is never any single technique that covers all instances in sailing, and Man Overboard Rescue is no exception. Your technique for a successful MOB rescue will depend on the wind, sea state, your boat, and your crew composition and experience.

Please read this report to pick out the key concepts (e.g. stay close) and the suggested techniques, and use them as a basis for practicing on your boat, preferably with your regular crew.

Summary of Results

1. The basic concepts of our training and techniques for MOB Rescue remain unchanged. We refined them as described in the body of this note.
 - a. Step One: Drop Flotation to the MOB; Spot Them. All too often this critical step is forgotten. Toss floatation; preferably use a MOM8 or similar devices as the pylon on those tools makes it easier to spot the area where the MOB occurred, in addition to providing flotation adequate for an adult MOB. If your crew is big enough (five or more), assign a spotter to point at the MOB full time.
 - b. Step Two: Slow the Boat to stay as near the MOB as possible. To keep the MOB in sight, you need to stay close to them; distance is the enemy here⁵. Methods such as the upwind and downwind “Quick Stop” are the basics for this step, although other methods may work depending on boat, crew and conditions.
 - c. Step Three: Connect the MOB to the boat with a Lifesling⁶ while staying enough distance away to not hit the MOB with the hull. Maneuver the boat with the Lifesling trailing so the MOB can grab the line and pull the sling over their head and shoulders. Alternatives to the Lifesling, such as throw ropes, may also connect the MOB to the boat, but then retrieving the MOB from the water becomes a separate task. In that case, the Lifesling can be useful to hoist the MOB back aboard from alongside.
 - d. Step Four: Stop the Boat. Do not drag the MOB through the water at more than a knot or more. Use this step to furl, lower or flog sails, based on the boat, sea and

⁵ Losing sight of an MOB makes the return significantly more difficult. With short-handed crews, devoting one person as a spotter may be impracticable or impossible. In this case staying close makes a return much easier.

⁶ Lifesling devices are commonly used in the US, and the US Sailing Safety Equipment Requirements 3.7.1 cite them and “equivalents”. For other options, reference World Sailing Offshore Special Regulations 4.22.5 “Recovery Sling”.

wind conditions, crew skill and seamanship level. Use the engine to slow the boat and take a good orientation beam to the MOB

- e. Step Five: Rescue the MOB back aboard. Ideally this is done with the Lifesling, as that provides a way to hoist the MOB in the sling back aboard with a halyard.
 - f. Step Six: Inspect the MOB for trauma, hypothermia, shock and other ailments. Treat accordingly.
2. While the steps listed above are proper in general, there are (as with all things in seamanship) different ways to execute Steps 2 through 5. Much of our testing involved those alternatives. Much of the body of this report reviews those techniques and results.
 3. Our night testing showed that AIS units were effective at relocating MOB's who were well beyond visual range. We do recommend, if possible, you dedicate a crewmember to the chart plotter to call out the range and bearing to the helmsman. (They effectively becoming the "spotter" when normal vision is impossible.)
 4. Furthermore, we began testing additional methods for rescuing MOB's with injuries where they cannot fully help with their own rescue. While we have some good preliminaries, more work shall be done here.
 5. Our testing showed needs for modifications of the Lifesling (note the Safety Equipment Requirements already call for additions of lights to Lifeslings.) US Sailing has published an advisory demonstrating one proven solution: "Recommendations Regarding Use of the Lifesling at Night" at <https://www.ussailing.org/wp-content/uploads/2024/05/2023.SAS-advisory-night-use-lifesling-1.pdf>
 - a. For nighttime use, better lights on the sling itself and adding SOLAS-grade reflective tape to the line proved very valuable.
 - b. A small, compact drogue is very useful as the Lifesling tends to follow the wake of the boat without one. The "water-skier" pickup is much easier if the drogue cuts inside the wake of the circling boat.
 - c. For some advanced recovery techniques, there may be benefits from upgrading the Lifesling line and adding slippery line. Those will be discussed with the technique in the body of this report.
 6. **As with all techniques of safety and seamanship, PRACTICING ON YOUR OWN BOAT IN VARIOUS CONDITIONS is critical, as the MOB method will differ by crew, boat, wind and sea state, and by visibility.**
 7. **As always, the real solution is to stay aboard the boat. Wear your harness and tether whenever outside, and CLIP ON.**

Detailed Results:

Regarding Step One: Drop Flotation to the MOB, Spot Them

This step is critical, but sometimes forgotten in the excitement of an MOB. Cases have occurred when the MOB's vest did not inflate, or they were not wearing flotation. Dropping flotation is key.

You should drop a MOM8 or a similar device, which does two things – it marks the spot with a six-foot pylon with a light, and it has a horseshoe ring for flotation. Even if the MOB were wearing flotation, the value of the pylon to keep a visual on the MOB is significant. [If you are the MOB, swim to the MOM8 as that is where the boat is most likely to spot you.] Also toss anything in the cockpit that floats, as you will mark the area of the MOB more clearly.

If your boat is fully crewed, designate one person as a Spotter to constantly point at the MOB, and loudly call out the range and bearing to the MOB. The easiest communication is by using a “clock” and “boat lengths” to identify where the MOB is. For example, say “three o'clock, 2 boat lengths.”

Shorthanded boats (four or less) may not be able to have a dedicated spotter. This means the pylon on the MOM8 is more important, and staying close (see step two) is critical.

On fast boats (say over 15 knot boat speed) the question always arises whether or not to drop a MOM8 or equivalent. We think the answer is still yes. The MOM8 will still be a way of locating the general area of an MOB, and may be more useful as it has the pylon to spot. If the MOB has no flotation, but is capable they may be able to swim to the pylon and use the MOM8 horseshoe for flotation.

Regarding: Step Two: Slow the Boat to stay as near the MOB as possible

Remember: Distance is the enemy here. If you cannot stay close, you are more likely to lose sight of the MOB, making the return geometrically more difficult to execute successfully.

1. Upwind: execute a “quick stop” by tacking the boat without touching any sheets. This brings the jib aback, and slows the boat the same way heaving-to does. Then: start your engine, but keep it in neutral until you know there are no lines overboard. Also deploy the Lifesling by tossing the sling into the water (the line will trail out on its own). Then begin to circle downwind, lowering the jib if you are fully-crewed, then jibe, and approach the MOB on a close reach. Ideally you execute this without easing the sheets from the upwind trim. Some boats may require some ease, but tight sheets help make this turn slowly and in a controlled fashion.

2. Downwind under spinnaker: luff up with the spinnaker, until it is just outside the shrouds. Then douse the 'chute on to the side deck keeping the tack and sheet tight. Then start your engine and motor-sail back to the MOB. By the way, you can probably execute this in higher winds than you imagine⁷
3. Downwind in high winds with spinnaker: If you think the wind is too high, beyond limits of luffing safely, execute your fastest safe takedown (probably a letter-box takedown). Then start your engine and motor-sail back to the MOB.

Some key notes:

1. Modern boats have stronger and more dependable engines than 25 years ago. Yes, you should practice returns under sail in case your engine fails, but do not hesitate to use the engine to maneuver your way back toward the MOB. Of course, assure there are no lines over the side that may foul the propeller before putting the engine in gear.
2. We tested an alternative of taking all sails down before returning to the MOB. Through our testing, and from other reports, we found that the time taken to douse sails means the boat is blown farther away from the MOB. It is startling how fast you can lose sight of an MOB as the distance grows. So, unless you have a very good seamanship reason, do not take the extra time (=distance) to douse sails.
By the way, the upwind quick-stop on most fully crewed boats will have the jib doused on the run, before the jibe. And of course you will have no headsail up if you had been under a spinnaker. But there is nothing wrong with circling the MOB under main and jib (or under main alone) both remaining tightly sheeted in on your original tack.
4. If conditions are very windy and you do not want to jibe as you return to the MOB, you can do a modified quick-stop where you tack around through 270° at the point where you would have jibed. Again, the motor will help you, as it assures your bow can swing through the eye of the wind and into waves.

How do I return if we have lost sight of the MOB? Should I have pushed the MOB button. Other ways of marking the MOB's position.

Personal AIS units provide the best way for a nearby boat to locate an MOB. The AIS signal will tell you where the MOB is even if there is drift from current.

Certainly if a navigator is near a device with an "MOB Button", they should push it and hold it for the required time. A second way on racing boats is for the helmsman to make a rapid change in the course when the MOB goes over the side: the track on Expedition or similar racing software will show a kink near the MOB spot. Both these mark only where the MOB was when they went over, and any search requires accounting for drift.

We did not test personal EPIRB device ("PLBs"), as they only broadcast to a rescue unit via satellite on frequencies that most boats do not have.

⁷ For an example of a rapid luff on Michael Moradzadeh's Santa Cruz 50, with a relatively thin mast, while sailing at night in 25 knot winds and surfing at 18 knots, see the segment of <https://www.youtube.com/watch?v=pfS9tesCmQI> beginning on 56:08.

5. The “figure eight” return is much the same as the quick stop with the chicken tack. Many sailors practice a figure-eight by tacking as a first step, which keeps the boat closer to the MOB than if you simply bore off to start your figure eight. Navy uses this method of tacking first as their protocol in those cases where they figure-eight a return.

Regarding: Step Three: Connect the MOB to the boat with a Lifesling

Candidly, we believe that several sailors may have been hit by the hull of the boat while trying to return and bring the MOB alongside. Thus we discourage getting the boat near the MOB in any case where the MOB might be able to get into the Lifesling.

Many modern hulls are difficult to maneuver closely at low speed, and become skittish in their handling. This is because they have some of the following characteristics: flat bottoms, thin foils that provide little sideward force without water flowing over them, saildrive units not directly in front of the rudder leaving the rudder well away from prop wash, or, two rudders, so no rudder is behind a propeller. Thus boats with one or more of these characteristics blow around more and cannot be steered finely.

Our doctrine is to deploy a Lifesling, and pick up the MOB with a “water-skiing” return. Circle the MOB, dragging the Lifesling line around the MOB so they can grab it, keeping a *minimum of one-half boat length* away from the MOB. Using this method means you do not need precision boat handling. This mitigates the potential issues from modern boat design, sea conditions, and a less experienced driver.

- Our observation in most pickups is the MOB grabs the line before the sling reaches them. This is good, as it gives a chance for the boat to slow or stop (see next step) before the person dons the sling.
- You may need to sail an elliptical course with a tight turn near the MOB, as Lifeslings tend to follow in your boat’s wake. Each boat and crew should practice to determine the best course in different conditions. Again, a small drogue attached to the Lifesling improves its performance here.
- Alternatives to the Lifesling, such as throw ropes, may connect the MOB to the boat, but retrieving the MOB from the water then becomes a separate task. It may be easiest at that point to throw the Lifesling to the person, once they are on the throw-rope. Use the Lifesling to hoist the MOB back aboard from alongside.
- Teams should practice this with and without engine assist, as an engine failure, or a line around the prop can eliminate the engine as a tool.
- We have considered whether a boat should sail by an MOB to see if they are physically able to don the Lifesling before deploying the Lifesling, and we have rejected this approach. We recommend you try to connect with the MOB using the Lifesling until you are convinced they cannot reach or don the device. If you find they cannot, then move to recovery methods suitable for injured MOB. It is better to quickly rescue an able MOB, as extra time in the water simply increases their risk of drowning.

Regarding: Step Four: Stop the Boat.

Do not drag the MOB through the water at more than a knot. We recommend furling, lowering, or flogging sails, based on seamanship and your skill levels. You may not want a flogging jib clew when you reach for a halyard, and the main boom may become an obstruction on some boats. In some light conditions, you may not have to drop your mainsail.

We have even found an over-eager crew rapidly pulling the MOB toward a stopped boat can flood the MOB's mouth. A tip: Train everyone in your crew to get into the Lifesling and then face away from the boat if they are being pulled too fast. This minimizes the water thrown at their face.

Regarding: Step Five: Rescue the MOB back aboard

Our recommendations are different based on the crew experience, size, and the size and type of boat. Of course all these recommendations must be tempered by the conditions.

1. For most boats under 72 feet with full crews, and almost mandatory for short-handed boats, and cruisers, use a Basic Lifesling Rescue with the halyard clipped on a knot about 11 feet above the sling.
2. For boats with hard chines near the shrouds, where the MOB could get trapped under a chine, use a recovery using the halyard to a knot higher up the Lifesling line (the "30-foot knot"). This technique pulls the MOB upward and out of the water as they approach the hull. This minimizes the time when they might be in a location to be buried under a chine, or be tossed against the topsides by a wicked wave. Also, if your boat has high topsides this technique may be better than the standard Lifesling recovery as the person is not hanging off a cleat while the crew hooks up a halyard.
3. For large boats with hard chines, high topsides, and powerful winches and crew, consider using a mid-line lift. This technique, like the prior one, provides a pull upward before the crew is alongside. Its 1:2 mechanical disadvantage means the rescue is faster, assuming the crew can manage the added load.

1. The Basic Lifesling Recovery

*Prepare your Lifesling ashore by tying a loop knot about 10-12 feet above the join of the sling to the trailing line ("the 11-foot knot"). We use a figure-eight on a bight, but other permanent loop knots work too.*⁸

- Once the MOB is in the sling, manually pull them alongside the boat to a point about amidships. You can cleat them there if you are short-handed and need to let go to fetch a halyard.

⁸ The knot 11 feet above the sling has several benefits, including: you do not have to lean over the side to the splice in the Lifesling to clip the halyard on, avoiding a potential second MOB; with the knot aboard and the person cleated to the boat, you can clip the halyard on without panic.

- Snap a spinnaker halyard onto the 11-foot loop knot. Spinnaker halyards are recommended as they come out of the mast at the highest point, and they typically have a wide lead out of their exit box.
- Uncleat the MOB if cleated, take up slack in the halyard, and hoist away. Most modern boats will have a large enough halyard winch or primary winch to hoist a person out. Also power winches are very common, or a powered winch handle will help.

2. Rescue the person, keeping them away from the boat using a higher knot (the “30 foot knot”). This technique should be considered if your boat has high topsides or hard chines, where you want to minimize the time the MOB is against the topsides.

Prepare your Lifesling by tying a loop knot higher up the Lifesling tow line. Try locating the knot the first time by a distance above the sling by about your boat length minus ten feet.⁹ Practice this with a real weight before finalizing the location of the knot to assure the knot does not jam at the masthead before the MOB is lifted over the lifelines with the line stretching.

- Once the MOB is in the sling, manually pull the MOB toward the boat, but do not bring them closer than the knot. This keeps the MOB about 30 feet off. Thirty feet is more than a half of one boat length for most boats, so is a reasonable distance. You can make it higher if your sea sense calls for it (see footnote 9).
- Fasten the halyard at the knot or between the knot and the sling.
- Hoist away. Again, most modern boats will have a large enough halyard or primary winch to hoist a person onto the deck. Also power winches are very common, or a powered winch handle will help.

Advantages and Benefits of the 30-Foot Knot:

1. Time saving. You do not need to pull the MOB right next to the hull before starting to hoist.
2. A lower chance of having MOB hit the hull hard. The lifting out of the water begins with the MOB away from the boat, and typically abeam or slightly abaft the beam. Also, the MOB is somewhat out of the water by the time they are near the topsides, keeping them clear of chines. This keeps the boat away from the MOB in large waves offshore and less likely to have the boat injure the MOB

⁹ This higher knot must allow you to clip on or below it with a halyard, then hoist the MOB up and over the lifelines without two-blocking or jamming the knot at the masthead. A more precise formula, assuming you would use a masthead spinnaker halyard is $0.9*(P-10)$, were P is the distance from your lower mast band to the upper mast band (in feet). In all cases you need to try this before you depart. Also, as the Lifesling line is 120' or 150' long, never tie the knot higher than about 55'.

3. A Time saver. The halyard hookup can be done anywhere along the section of line below the stopping knot, it does not need to be clipped into the knot.
4. Ease of hoisting by Corinthian crew. The mechanical advantage is 1:1, allowing for an easier hoist.
5. The far end of the LifeSling need not be fastened down; it is lazy on this hoist. In a mid-line lift the far end must be positively secured to a hard spot.

Disadvantages:

1. If your boat is not totally stopped, the MOB may slide aft, making the final hoist on deck farther aft than you would like. MOB's may hit the topsides aft of the lifting point. If you are moving too fast, you could be pulling them up near the transom, which might be dangerous in chop. Again, practice on your boat, steering to keep the MOB abeam of the shrouds.

3. Advanced Techniques for Larger Boats – The mid-line lift

The mid-line lift technique was developed for when a large boat sends out a rescue swimmer, as the boat is so big that an MOB should not be pulled alongside. The swimmer will be attached to the boat by a retrieval line anchored to a point amidships. For example, see the video of Comanche's MOB recovery at <https://www.ussailing.org/education/adult/safety-at-sea-resources/>, along with the video at <https://youtu.be/GtxtS0h9Qrc>. You will see the former Comanche luff and come no nearer than one boat's length from an MOB, then send out a highly-trained rescue swimmer. The swimmer clips to the MOB. The boat crew clips a spinnaker halyard to the boat end of the retrieval line and both crew are lifted out with a mid-line lift on the retrieval line.

Large boats with strong winches and manpower may want to use the mid-line lift with a Lifesling. In this case, the halyard is clipped on the Lifesling line anywhere between the fixed point on the boat (typically on the stern pulpit) and the sling. Although the mechanics are at a disadvantage of 1:2, strong crews and winches will be able to hoist the MOB aboard. *Preparation of the Lifesling line and practice are important here. Please contact US Sailing if you want more information here.*

The mid-line lift has the same first four advantages as the 30-foot knot when used on a Lifesling line.

Advantages:

- Keeps the boat away from the MOB in large waves offshore and less likely to have the boat injure the MOB. The MOB should come in at the shrouds and should be lifted as they come closer to the boat.
- 1:2 purchase brings the MOB to the boat much faster.

Disadvantages:

- Requires changing to a floating spectra line and additional equipment (e.g. a block to attach halyard to reduce chafe).

- 1:2 purchase so more energy is needed to hoist the MOB aboard.
- Getting the Lifesling line to the MOB may be more difficult while circling if you have set up a shorter LifeSling line.
- If your boat is not totally stopped, the MOB may slide aft, making the final hoist on deck farther aft than you would like. MOB's may hit the topsides aft of the lifting point. If you are moving too fast, you could be pulling them up near the transom, which might be dangerous in chop. Again, practice on your boat, steering to keep the MOB abeam of the shrouds.

Other Findings with regard to Rescues.

1. At night, it is difficult to see the Lifesling and the Lifesling line, which are key to these recovery techniques. Rich du Moulin devised a way to affix lights on the “front” of the Lifesling to show the boat and the MOB where the sling is. One light faced “up” and the other “down” so one was visible whichever side the sling landed. Additionally, he affixed SOLAS reflecting tape at intervals along the last 50 feet of the Lifesling tow line. With a typical handheld spotlight, the line shined significantly, allowing the boat to get the line to the waiting MOB. The US Sailing Advisory is at: <https://www.ussailing.org/wp-content/uploads/2024/05/2023.SAS-advisory-night-use-lifesling-1.pdf>
2. As we have said, Lifesling’s line and sling tend to follow in your boat’s wake as you turn. Again, a small drogue attached to the Lifesling improves its performance here, as the line and sling will then cut across the wake to the MOB in the middle of your circle.
3. Experimenting with a return using just the signal from a personal AIS was very successful. We found it very useful to have one person “spotting” the electronic icon for the MOB at a navigation plotter, and calling out range and relative bearings to the helmsman and to the deck crew who are using spotlights. Sailors should have an AIS unit as part of their gear if their sailing plans include nighttime sailing, very fast sailing, and in areas where the wave height could obstruct constant visibility of an MOB from the boat. Short-handed boats should certainly have AIS units as they have no guarantee of continually viewing the MOB.
4. Multiple night-time spotters with bright spotlights allow the driver and crew the opportunity to find the MOB and plan the circle to connect them to the boat with the Lifesling. One spotter can shine the light in the direction of the MOB and the other at the Lifesling.
5. We experimented with the issues rescuing a person who is incapacitated. While we did not experiment to the extent we wanted to, we have come to some basic observations.

- a. To rescue an incapacitated MOB, you will have to have a “rescue crew” equipped to be lowered over the side on a halyard. This crew cannot be a last-minute decision, but must be *pre-trained and must practice with the crew*. You will need two, as a single rescue crew might be the MOB. This crew should be wearing a dry suit, a climbing harness, a rescue life vest and a helmet. A certified rescue swimmer is different and will know what to wear.
 - b. You must bring the MOB within five feet or so of the boat. The risks of hitting the MOB with the bow arise here. Use the engine and proceed slowly.
 - c. You must stop the boat so the rescue crew is directly opposite the MOB. This is typically just forward of the lee shrouds. Keep the wind fine on the opposite bow. Use your engine to fine-tune the attitude and position, and maintain it while the rescue crew is next to the MOB.
 - d. The rescue crew must have a strop or similar to connect the MOB to the rescue halyard. Coast Guard Rescue Swimmers try to position the MOB so their face is just below the Rescue Swimmer’s chin, so the swimmer can hold the MOB with their legs when they are being lifted.
 - e. Crew aboard the rescue vessel will have to hold the halyard away from the topsides while hosting the Rescue Crew and MOB. The person guiding the halyard is critical to the healthy success of this evolution.
6. Recovering a person who slips over the side but is still clipped on.
The first step is to stop the boat as fast as possible to avoid drowning the MOB. Do so by performing a “Quick Stop” tack (if going upwind) or luff and drop the spinnaker if going downwind. This should bring the MOB to the high side of the boat, if the jib is up; or close alongside, if coming up from a run. You can either grab the person and lift them up with the aid of their tether, or drop the Lifesling over the side and hoist the MOB back aboard.

We did test the concept of hooking a halyard onto the tether and hoisting the person aboard at a 1:2 pull as practiced by some large, foreign boats. We found the typical tether does not slide through the typical halyard shackle; in fact we broke the tether attempting this. We will experiment further, but recommend using more classical ways of recovering MOBs in this instance.

[Note: if you are the MOB and feel dragged too much, release the shackle at the chest side of your tether to become a regular (but live) MOB.]

Questions with regard to these conclusions should be addressed to the following members of US Sailing Safety-at-Sea Committee:

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RESOURCES:

1. A video regarding Advances in MOB Recovery, published in 2021.
<https://www.youtube.com/watch?v=pfS9tesCmQI> This includes some video regarding the use of the Lifesling to recover MOB from a traditional Quick Stop.
2. The paper “Evaluating MOB Return and Recovery in the 21st Century” York et al, is available at <https://www.ussailing.org/wp-content/uploads/2024/05/2020.New-Study-Evaluating-MOB-Return-and-Recovery-in-the-21st-Century.pdf>
3. The paper covering the 2005 Symposium is “Final Report Crew Overboard Symposium, John Rousmaniere, June 26, 2006 is at https://www.ussailing.org/wp-content/uploads/2018/03/2005_Crew_Overboard_Symposium.pdf