

# Life Vests

## Introduction

**Personal flotation devices are required and mandatory for all TRR paddling venues when on the water.**

Life Jackets (AKA: Personal Flotation Devices or PFDs) are a critical piece of safety gear for paddlers. According to the National Boating Safety Council, roughly 500 people die in recreational boating accidents each year in the United States because of non-swimming-related drowning and very few of them were wearing a life jacket. American Whitewater maintains accident statistics that I run summaries on each year, the top two accident causes in the past 10 years are Flush Drowning and not wearing a PFD. The USACE began to evaluate trends and found that of the 1,948 fatalities that occurred between 1997 and 2009, 91 percent of the victims were not wearing a life jacket. Further, it was determined that in most of the incidents, a life jacket would have likely kept the victim from drowning.

Life Jackets:

- Conserve energy and allow swimmers to rest
- Maintain buoyancy thereby assisting in prevention of foot entrapments
- Increased buoyancy also helps prevent being swept away by dangerous currents below the river surface
- Are essential for rescuing others

Life jackets work pretty much the same way boats work, they displace water with a much lighter material – foam. Water is relatively heavy, 62 pounds per cubic foot. Humans on average are close to the same weight (63 pounds) and thus slightly less than buoyant. At the other extreme, air weighs less than .1 pounds per cubic foot (life jackets on a plane for example or kayak flotation bags). Since air bags don't hold up all that well in rough water, life jackets use lightweight foam. A PFD rated at 15.5 pounds will maintain buoyancy for a 200-pound person.

Large seafaring vessels use the traditional horseshoe vests (Type I). These have lots of flotation and tend to turn swimmers face up. Unfortunately, they are generally quite bulky and not very practical for paddling. Paddlers typically wear either Type III or special use (rescue vests) which are classified Type V. Type III vests have less flotation (15.5 pounds are common) but are much more comfortable and come in a wide variety of styles. Whitewater rescue vests range from 15.5 – 17 pounds. A great test you should perform every year is jump into a deep calm pool and relax – your mouth on up should be out of the water.

## Types

The USCG (Coast Guard) requires everyone on a vessel have a wearable life jacket (and they really do check). Furthermore, all life jackets must have the USCG approved label which all commercial jackets have these days. We described the types of life jackets above, lets take a deeper dive on the differences between rescue vests and standard vests. Rescue vests have a very sturdy harness system with a quick release belt.

## Life Vests



Rescue vests have a belt, tri-glide metal buckle, and a plastic snap buckle that all work together:



The belt is threaded through a very sturdy harness on the jacket to distribute the load equally around your torso. A stainless-steel ring is threaded on the belt which may be attached to a locking carabiner for tethered rescues (or towing boats). It's real important to properly thread and secure this belt system to ensure a quick release when desired. Here is a good video demonstrating the rescue harness, threading, and a sample of rescues: <https://www.youtube.com/watch?v=m1FzPZC5LbQ>.

Please note, I strongly discourage threading through just the buckle as plastic buckles can break and the tri-glide buckle ensures a straight-line feed to the buckle also preventing jamming.

Some other design considerations are low profile vests commonly used for racers and many kayakers versus canoe/raft full length vests.



### Rescue Vest Applications

Common uses for Rescue Vests are:

- Towing: <https://www.youtube.com/watch?v=iOH19kjb4Xc>
- Pre-set Safety Belays: [https://www.youtube.com/watch?v=H\\_oH92-bJWA](https://www.youtube.com/watch?v=H_oH92-bJWA)

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- V-Lowers: <https://www.youtube.com/watch?v=a8VfzHhM6A>
- Live Bait Rescue (tethered): [https://www.youtube.com/watch?v=T5Mldr\\_eR3o](https://www.youtube.com/watch?v=T5Mldr_eR3o)

There are other cool applications of the rescue vest as well. As with any tool, it's important to get the proper training on the usage and safety precautions to use rescue vests effectively. I also recommend further practice, especially with the quick release feature so you can release instinctively.

### Considerations

People come in all shapes and sizes. If lean and athletic, you may require more flotation. I personally like full coverage rather than low profile vests to avoid getting banged up while upside down in my boat. Unfortunately, manufacture size labels are all over the map – don't trust – verify! I highly recommend trying on several different brands to see what feels best and properly floats you. Two major styles are pull-over vests common to Astral and those using a zipper entry (every other manufacture). Pull over vests can damage exposes zippers on dry suits (and they are very expensive to replace). Each brand has varying accessories and some add-ons like back packs, tow tethers, built-in throw bags, etc.

Regarding women, they are shaped quite differently from men and that posed problems in the past. Stohlquist has a wide assortment of vests specifically designed for women that should be considered.

I also recommend getting a bright color jacket. Black may look cool but is difficult to see if you are trapped underwater or at dusk. This isn't a fashion accessory, it's meant to save your life.

When wearing a life jacket, familiarize yourself with the outfitting strap adjustment to ensure a snug and comfortable secure fit. Some incidents have taken place when the life jacket wasn't properly secured and came off the swimmer. The vest has to be snug enough, so someone can pull you out of water into a raft by the shoulder straps.

Major Vendors are:

- Astral: <https://www.astraldesigns.com/shop/life-jackets>
- Kokatat: <https://kokatat.com/shop/mens/life-vests>
- Stohlquist: <http://www.stohlquist.com/life-jackets.html>
- NRS: <https://www.nrs.com/category/2547/life-jackets/>
- Extrasport: <https://www.extrasport.com/>

### Conclusions/Recommendations

The Life Jacket is a very crucial piece of safety gear that should last many years. I strongly recommend performing a float test annually by jumping in a deep pool and ensuring your head is out of the water. In general, don't use your vest in pool sessions. Chlorine can damage threads and fades the vest. If you do use in a pool session, rinse thoroughly with clean tap water. Try a variety of brands/models to find the vest that works best for you. On rescue vests, the wider the belt – the better (distributes load over a much large surface area). Check the tri-glide buckle, the gaps should be easy to clear and edges smooth (not sharp which can bind the belt). Set a good example to others, always wear a life jacket on rivers and open water – who knows, it may save your life some day.