



Alberta Adventure Divers Nov. 29, 2020

We LOVE cold water diving:
Exposure Protection 101 – Diving in Alberta
By Mark Faas & Connie Faas



Introduction, by Connie:

As land-locked prairie divers, we celebrate what makes cold water diving the best:

- All our local diving is cold water diving – even in the middle of summer!
- Diving in our local lakes keeps our dive skills sharp, keep us active as divers, and gives us the confidence to travel to other cold water destinations to dive.



cliffs in Twin Lakes and Waterton, Alberta, snorkel with the orcas in Norway, dive with glaciers in Antarctica, swim through kelp forests in BC, ice dive in the prairies, explore the wrecks of the Great Lakes, dive in the Rocky Mountains, and more!

- We get to see diverse marine life: wolf eels, giant Pacific octopus, plumose anemones, seals and more: cold water diving delivers biodiversity!
- A solidarity and unity among cold water divers exists as they handle the challenges. Dive by the motto, “If you can dive in cold water, you can dive anywhere”.

- Not everyone can travel to a warm water location. Due to travel restrictions, budget, or limits on vacation time, we need to dive close to home to dive regularly. Active divers are open to cold water diving because it increases their options.

- Locally, we typically have the clearest viz in the lower temperatures.

- Cold water divers have the chance to dive in weird and unusual environments: the underwater



Ahhh – the memories we have made on these adventures. Every creature and location above has been experienced by Connie and David. All these are made possible by having a sense of adventure, and comfort in cold water diving.

The chilliness of the waters is balanced with the warmth of new friendships made. We dive with



many new dive buddies who quickly become friends upon sharing these adventures.

As David and I bask in the memories of these adventures, and share pictures, we want to assure all divers that cold water diving can be done in relative comfort. Trust us, if it was not fun, we would not do it! Warm water, tropical diving is easy to love: this is about having a love of cold water diving. Enjoy the primer that follows, by Mark, as he reveals the secrets and tricks of the trade to enjoying cold water diving.

Connie Faas

Exposure Protection 101, by Mark Faas:

Water conducts heat 20 times faster than air, so all water feels much colder than air at the same temperature. Divers must choose their exposure protection carefully to have a comfortable dive.

This article will discuss the most common choices for exposure protection locally, and considerations for when to choose them. Additionally, there are several factors which modify how much insulation (underwear) is required, and options for this as well.



DRYSUITS

By far drysuits are the most common option for divers in Alberta, even for new divers.

At its most basic, a drysuit has an outer layer which prevents water from getting into the suit, and an inner layer of insulation which provides thermal protection.

The diver will add air to compensate for suit squeeze as they descend (which also affects buoyancy).

Drysuits are versatile because you can manipulate the inner layer to provide

more (or less) warmth depending upon the dive you are planning and surface conditions.

WETSUITS

The other option for exposure protection is a wetsuit. These are made from neoprene and work by preventing the water from moving around you as you swim. In Alberta, this typically is a 7 mm thick, two piece farmer john style wetsuit.

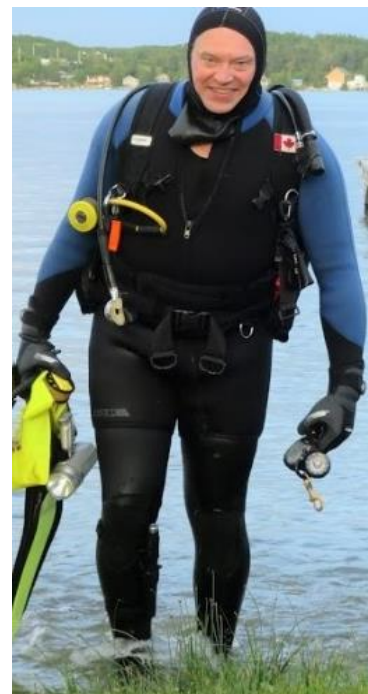
WHEN TO CHOOSE A WETSUIT

Diving in a wetsuit is an option. In Alberta, typically, this will be reserved for the warmer summer months (July, August, and early September). With a wetsuit that fits well, you can be as warm as someone diving in a drysuit, particularly for the first dive.

Getting into a wet wetsuit for the next dive is a less comfortable experience, but not usually a problem on a warm day.

WHEN TO CHOOSE A DRYSUIT

Drysuits are great for all water temperatures we commonly experience in Alberta. The warmest water conditions we



typically experience are in late July/early August when water temperatures may rise as high as 20C (68F) at the surface.

In this case, the diver will have a thin base layer under their drysuit (for example, the Aqualung MK1 fleece liner). On a hot day, you can expect to be a bit warm before you get into the water, but comfortable in the water. You may choose to wear wetsuit gloves, or no gloves at all.

As the water temperature drops in September (or June), you will likely choose a thicker base layer (ie. the Aqualung MK2). You will certainly want a hood (typically a 5 mm neoprene hood), and probably dry gloves with a medium weight glove liner. You'll also want warm socks! This



level of exposure protection is what most local divers will start with, as it is versatile, and can be used in the summer months (omit gloves/hood), or colder months (add more base layers, shorten dives).

For comfort in colder months like May & October, you will want more layers under/over your MK2, or underwear such as the Aqualung Thermal Fusion. You will also want the best socks you can get!

The coldest times to dive are the few weeks after the ice comes off the lakes, or before the ice goes on. Here you'll want every layer you own! You may even want heated clothing, such as the Thermalution vest or Light Monkey heated vest. The thermocline will disappear and the water temperature is usually a consistent 4C from the surface to the bottom of the lake.

Finally, there is ice diving! We don't get to go ice diving often, but when we do, we are rewarded with fantastic vis. and an incredible story of bragging rights! You might think we wear even more insulation, but actually, the water doesn't get any colder (otherwise it is ice!). As well, the dives are shorter. All this means you'll dress with more concern for the air temperature than the water temperature.



OTHER FACTORS THAT AFFECT WARMTH WHILE DIVING

People do polar bear plunges in the middle of the winter (or above the Arctic circle). So one might ask if they can do that, why can't I dive in a Speedo?

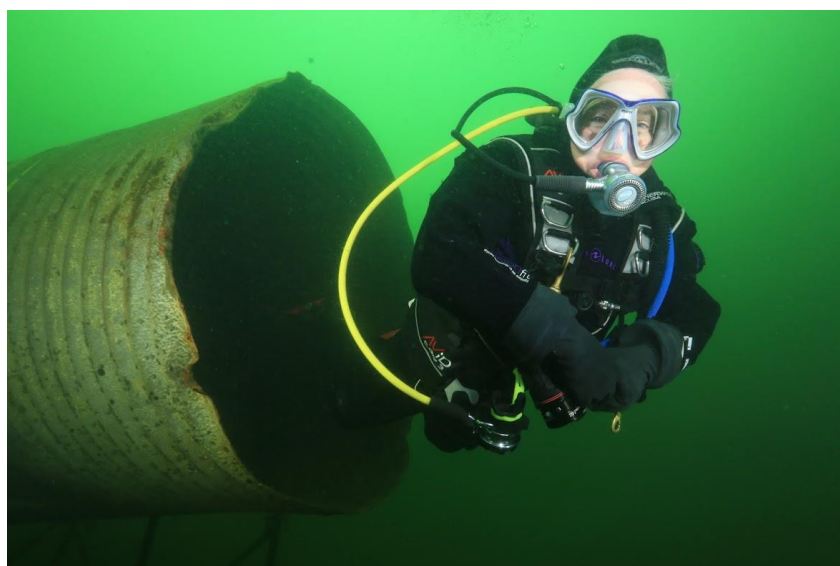
Here are a few of the factors which will cause you to add or remove exposure protection:

Length of dive - the longer you are underwater, the more time you'll be losing heat for. This is one of the main reasons you can actually wear less insulation for an ice dive than a late season open water dive.

Activity Level - will you be swimming hard, or barely moving? Activity generates heat and will affect how much insulation you want.

Metabolism - if you are hungry, you are more likely to feel the cold. As well, some people generate more heat than others, or are more comfortable in a cooler environment.

Body Shape - A large round object will lose a smaller proportion of heat to the environment than a short thin one. Same thing applies to humans!



Should you have any questions about exposure protection, please ask Mark mark@albertadivers.ca, or Connie diver@albertadivers.ca, at any time.

By Mark Faas

Dive store winter hours:
Tues to Fri from 8:30 to 5:30 pm, closed for an hour at lunch. Mon. and after hours is by appointment: we'll work out a mutually acceptable time.

Thank you: David, Dan, Mark and I truly appreciate the strong and loyal support from our customers. Thank you for thinking of us, and shopping with us, even though we are not able to dive for a while.

Stay healthy: As divers, we are very aware of the importance of good health. Say safe, everyone! We offer curbside pickup, delivery, and private appointments at the store to help minimize contact.



Connie & David Faas, Dan Ermel, Mark Faas
www.albertadivers.ca

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