



September

Welcome to fall! For many it's the best season for diving. Cooler days, warmest of waters and so many ocean tourists dropping by our favourite dive sites! If the last few weeks are any indication, this fall season is shaping up to be one for the dive log. Summer was no slouch, either. It was walking on the sun hot but that didn't stop our ocean adventurers – you were out in droves throughout the weekdays and on weekends. What a crew! We don't have a lot for you in this edition, but hopefully it will hold you over until your next dive.

Events and Stuff

Annual AGM: A bit later than usual, we had our AGM on July 11, 2025 at the Admiral Club at Graves-Oakley. We covered our usual topics – accomplishments and activities over the past year, Jane Biggs Award and we hosted guest speaker Kristina Boerder from the Community Eelgrass Restoration Initiative at Dalhousie University.

Jane Biggs Award: This year's Jane Biggs recipient was drum roll please!!!!..... Elliofthenorth! Ellie has been instrumental in growing the local snorkelling community. Through her pictures and enthusiastic posts, she has shown us that you don't need a bunch of dive gear to take in the sights of the underwater world. She has really promoted the sport of snorkelling and has brought it into the fold with diving: whereas in the past a dive outing would consist exclusively of divers, it is now frequently a mix of snorkellers and divers. Congratulations, Ellie! We are lucky to have you in our community!

Website: It's old news now, but we still wanted to mention it. Our web whiz Denis, had some ideas for improving our site so we gave him the ok and off he went. The site has a completely different look and feel with the newsletter section getting a much-needed upgrade. Denis incorporated a bit of AI into this section so rather than spending hours writing newsletter highlights he put his nano pens to work and within a few minutes generated summaries for each newsletter! Check it out [here](#).

NSUC Volunteers/Help

Public Presentations: We are looking for topics and presenters for the Halifax Public Library and Maritime Museum of the Atlantic's (MMA) Tuesday Night Talks. Both are currently booking for their winter and spring sessions, respectively. The MMA asked for a list of presenters and topics by the end of September for their review. For these presentations they would not be looking for topics about diving itself, but rather cultural subjects or those related to the marine environment – essentially something that would be of interest to the general public rather than just the dive community. The library is a bit more flexible on topics, but the more accessible it is to the general public the better. You can present as an individual, or as a group if you like. The executive would also be happy to join you if you like. Send us your ideas we will forward them to the MMA the evening of Wednesday, October 1, 2025 (we have some more time for the library).

Newsletter Help: We need writers! With life being so busy it becomes a challenge to write and compile articles for each edition. If there's a story you would like to tell, send an email to either our general NSUC



account and we'll get to work with you. Whether you would like to be a regular contributor or send in a one-time article, we want to hear from you!

Who Knew Nova Scotia was so Tropical?

At least in the fall it is! And judging from all the social media posts, Nova Scotia got a bumper crop this year. We decided to have a bit of fun and invite members to post pics on our Facebook page of their encounters. A lot of great photos have been posted so far. Once things slow down, we'll pick our favourite and the lucky winner will receive some NSUC swag (yeah, yeah, I did say you only get bragging rights, but I completely forgot about our small inventory of NSUC stuff!). In the meantime, however, keep 'em coming! We'll announce the winner at our next general meeting so keep watching for the date and be sure to join us to collect your goodies. Here is a small sample of pics from our page:



Seahorses in the water column at Paddy's Head. Photo by EllioftheNorth



Honeycomb Cowfish, Paddy's Head. Photo by Eli Wolpin



Snowy Grouper, Yankee Cove. Photo by Beverly White



Banded Rudder Fish, Foxpoint, NS. Photo by Hunter Stevens



What's in Your Air?

Choosing a reputable dive operation with a reliable safety record is important for ensuring your personal safety while diving — even if you rely on them for nothing more than air fills. Having clean air to breathe is one of the basic requirements for sustaining life both above and below the surface, so divers and dive operators alike must be mindful of breathing gas purity.

Gas purity is of particular importance to divers and the diving industry because hazards relating to air supply contamination increase in severity with depth. Two molecules of particular concern that must be closely and responsibly monitored in divers' air supplies are carbon monoxide (CO) and carbon dioxide (CO₂).

CO is an odourless, tasteless, and invisible toxic gas, which makes it a problematic culprit for breathing gas contamination due to the ease with which it can infiltrate gas supplies and remain undetected without careful monitoring and prevention. The reason CO is a dangerous molecule is because it binds readily to haemoglobin, which is the primary carrier of oxygen in the blood. With lots of CO bound to the blood's haemoglobin, the blood's ability to carry oxygen is diminished, which can cause both immediate and long-term health effects related to oxygen starvation in tissues and organs.

Elevated levels of CO₂ in breathing gas also pose a significant threat to divers because CO₂ is the most abundant potential contaminant present at fill station locations. CO₂ has many of the same characteristics as CO but is unique in that it has an additional oxygen atom, double bound to the central carbon atom, resulting from complete rather than incomplete combustion. CO₂ is essential to life on earth due to the role it plays in photosynthesis. However, in humans, CO₂ is a byproduct of respiration and is the primary mechanism that triggers breathing in our bodies. Therefore, exposure to elevated levels of CO₂ can result in increased respiration, hyperventilation, dizziness, spasms, unconsciousness, and even death. Therefore, it is important to manage CO₂ in breathing gas to ensure it remains below established limits.

The challenge that divers face with exposure to CO and CO₂ in breathing gas is that levels of contamination considered to be within safe limits on the surface become very problematic at depth. For example, a CO reading of 10 parts per million (ppm) at the surface would have an equivalent effect of 60 ppm on a person at 50 metres of seawater. This would be dangerous to divers because according to the US Environmental Protection Agency, the maximum short-term exposure level to CO must not exceed 35 ppm, within a one-hour time frame, no more than once per year. Evidently, divers must be very mindful of CO and CO₂ risk, as multiple exposures could easily add up to exceed the accepted annual safe levels recommended to avoid CO and CO₂ poisoning or even death.

To manage the risks associated with exposure to CO and CO₂, it is important to consider potential origins and their relative proximity to air compressor intake values. Common sources of both CO and CO₂ overlap, so dive operations can generally manage both issues simultaneously with a comprehensive risk mitigation and hazard identification plan for their air fill stations.

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As a consumer, it is important to perform a background check on prospective dive operations to gain insight into their risk mitigation procedures and policies specifically relating to cylinder fill stations. Transparency and acknowledgement about where intake and output valves are located relative to these potential sources is essential for finding a reputable dive business who will work to keep you safe on your next diving adventure.

[READ MORE:](#) Surviving Carbon Monoxide Poisoning While Solo Diving (St. John's, Newfoundland, Canada), from the Q2 issue of DAN's Alert Diver Magazine:

I walked into the closest shop with a fill station, and my alarm bells started to ring. The filthy compressor sat in a pool of oil and was incredibly grimy. The walls were covered in black soot, and the air intake was at waist level and went into a parking lot filled with cars. The situation should have been enough to stop me, but I was young and naïve, so I ignored the warning signs. [READ MORE](#)

DAN is Your Diving Safety Association. Visit World.DAN.org for an extensive range of diving health and safety content.

What's Happening Out There?

Are there any events or activities taking place in the upcoming months you think might be of interest to the underwater community? If you would like get the news out there let us know and we can post it in our newsletter. Just send your idea to any of the email addresses below and we'll get in touch.

Contact Us

General enquiries:	novascotiaunderwatercouncil@gmail.com
President (Jenn Meisner):	presidentnsuc@gmail.com
Vice President (Wayne Joy):	vicePresidentnsuc@gmail.com
Regional Director (Alice Ortmann):	regionalDirectornsuc@gmail.com
Treasurer (Beverley White):	treasurersuc@gmail.com
Secretary (Cliff Andrews):	secretarynsuc@gmail.com
Website:	https://www.novascotiaunderwatercouncil.ca/index.php
Facebook:	https://www.facebook.com/groups/982066185291058