



The Deck Log

Newsletter

Master Mariners of Canada (MMC)

NL Division

January – March 2024

January 2nd, 2024

It is with great sadness that we share the news of the passing of a well established Master Mariner and long time member of the MMC NL Division, Captain Edward Anthony. Captain Anthony was an avid volunteer with the Nautical Skills competition held at the Marine Institute. For many years, he acted as a judge for the Ship Handling exercises run during the competition. Where he enjoyed both observing and evaluating student performance, along with acting as a mentor for the next generation of seafarers. He was a member of the inaugural College of Fisheries (now the Marine Institute) Diploma of Technology (Navigation) graduating class of 1968-1969.

From Barrett's Funeral Home site:

Passed peacefully away at the Health Sciences Centre, Captain Edward Frank Anthony, in his 76th year.

Predeceased by his parents, Ernest and Ellen Anthony and in-laws, Ida and Bransfield Styles.

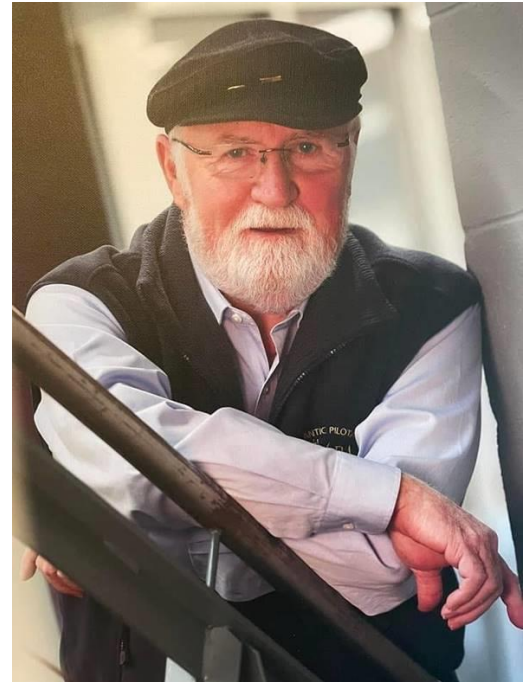
Left with precious memories, his loving wife of 54 years, Ruth Anthony; his children, Don (Jacqueline) and Joanne (Mark Stares); and his beloved grandchildren Emmett, Mary-Ellen and Quinlan. Ed also leaves to mourn his sisters, Patsy Duever (Tom) and Jean Banerjee (Fernand Hamann); brother, A.H. Zaki (Ena); niece Aisha Hyde (Darrell); aunt, June Andrews (Gerald Saunders); uncle, Frank Pilgrim (Jean); and cherished cousin who he thought of as a son, Chris Pilgrim (Maureen).

Ed leaves a wide circle of friends and colleagues throughout the provincial and national maritime communities.

He was a respected Master Mariner and long time member of the Board of Directors of the Atlantic Pilotage Authority. He was a passionate member of his profession and, while he would shrug off the compliment, a mentor to a generation of Newfoundland and Labrador seafarers.

Following in his mother's footsteps, Ed became a painter in his later years and was fortunate enough to develop a group of friends through his art, which doubtlessly enriched his life and ours. He never saw a rusty boat that he didn't want to commit to canvas.

The family would like to thank all the homecare providers from Compassion Homecare and, in more recent months, the staff at Lane's Retirement who cared for Ed throughout his battle with Lewy Body Dementia. We are especially grateful to the Health Sciences Emergency team who provided comfort in Dad's final hours.



Captain Edward Anthony
December 22, 1947 – January 2, 2024.



**Captain Anthony, at his home,
with some of his paintings.**

Any opinions, expressed in this newsletter, do not necessarily represent the views of the Master Mariners of Canada (MMC), NL Division. Editor: Glenn Fiander

January 10th, 2024

Nautical Skills 2024 COMPETITION

An exercise familiarization session, for the Nautical Skills Competition, was held at the Marine Institute cafeteria (food being provided). All competition participants and volunteers were invited to attend. The teams were announced and team members were able to get together for the first time. Participants were given an overview of the exercises and the simulators to be used during the competition.

January 11th, 2024

The monthly meeting, for January, took place at the Crows Nest. This was a combined meeting with The Society of Naval Architects & Marine Engineers (SNAME) Canadian Atlantic Section. The shared meeting was offered virtually and there was no formal agenda. The guest speaker, Dr. Jonathan Anderson, gave a presentation on cybersecurity. After the presentation, the floor was opened for discussion and questions.

Presentation Title: Marine Cybersecurity



**Dr. Jonathan Anderson
Presenting at the January 11th meeting.**

Abstract: As marine systems are increasingly digitalized, they accrue the benefits of increased efficiency but also the costs of cybersecurity risks. Safety-critical systems were designed - naïvely - for a safe, trustworthy environment, but these systems are now exposed to attack vectors they cannot defend against. These realities add up to a risk of cyberattacks that could cripple today's vessels - or worse. Fixing these problems will require more than technical solutions. There are lessons to be learned from other domains of computer security, including industrial control systems, networking and operating systems. However, designing robust marine systems for the future will require approaches and instincts that are often lacking in digital systems, including design for failure, graceful degradation and human-over-ridable systems. In this presentation, we will discuss the history of the marine cybersecurity problem; consider the technical issues at stake and lessons to be

learned from other domains; and describe an agenda for how we can work together to secure future marine systems.

AGM, February 8th, 2024

The AGM, for 2024, took place at the Crow's Nest (10 present) and was also conducted by MS Teams (7 present).

Captain March said the minutes of 2023 AGM were distributed by email, by the Secretary, and no concerns were raised. Minutes were accepted.

Captain March presented his report and spoke about the activities that occurred in 2023. Among the highlights was the provincial AGM, 2023 Nautical Skills Competition, guest speak topics such as cybersecurity and NATO War Risk Conference.

Captain March dissolved the 2023-2024 council. Captain Eben March and Captain John Ennis have decided to step down from their position of Divisional Master and Deputy Divisional Master respectively. Captain James Parsons was the only nomination for the position of Divisional Master and was accepted by acclamation. Captain Kristopher Drodge and Captain Jamie White were nominated for the position of Deputy Divisional Master and a secret ballot vote was held. Captain Jamie White received the most votes.

The following are the Councillors for 2024 – 2025:

Divisional Master: **Captain Jim Parsons**

Deputy Div. Master: **Captain Jamie White**

Treasurer: **Captain Sean Quinlan**

Assistant Div. Master – Membership: **Captain Richard Edwards**

Assistant Div. Master – Special Events: **Captain Jim Parsons**

Secretary: **Captain Ray Dalton**

Treasurer, Captain Sean Quinlan presented the financial ledger. Captain Joel Hickey and Captain Ray Dalton audited the ledger. All was in order.

Captain March gave an update on the current membership of the NL division.

Currently we have:

Full time members: 38

Associate members: 5

Honorary members: 3

Cadet members: 17

Senior members: 5

Total of Members: 68



Captain March gave an update on national business.

February 8th, AGM

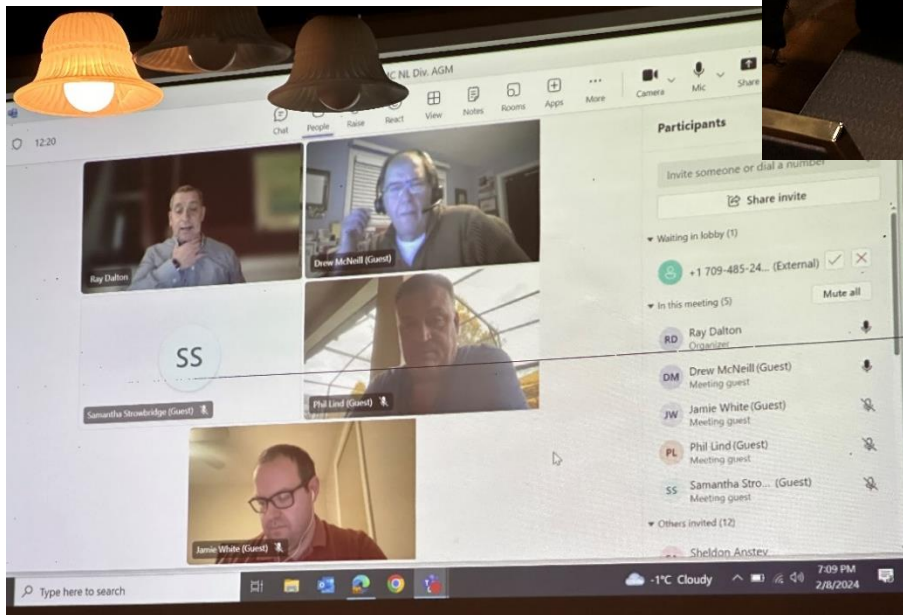
- Eric Asselin is the CMMC National Administrator and was in attendance for the Nautical Skills competition that took place at the Marine Institute, the following 2 days.

- Captain March put forward the request to National to make Captain Zaki a lifetime member. This was accepted by National and Captain Zaki was presented with his certificate at the Nautical Skills Competition Gala on February 10th.

Captain March said the 2024 Nautical Skills Competition (NSC) was scheduled to take place February 9th & 10th, 2024.

Captain March opened the meeting to new business.

- Captain March took time to remember Captain Edward Anthony who “crossed the bar” on January 2, 2024. Captain Anthony was a longtime member of the MMC NL DIV, and a respected Master Mariner and longtime member of the Board of Directors of the Atlantic Pilotage Authority.
- Discussion regarding the fees charged to administer credit card billing. There hasn’t been much demand for credit card usage. It is believed that the only region using this is NL. Eric Asselin will investigate this to see if we can get it set up nationally or cancel it all together.
- Captain Dick Spellacy questioned if the MMC accepted members from different counties.



February 8th, AGM

February 9th – 10th, 2024

The 12th annual Nautical Skills Competition took place on Friday evening February 9th & Saturday 10th. Once again, the event was hosted by the Master Mariners of Canada (MMC) NL Division, in collaboration with the Fisheries and Marine Institute (MI). Once again, a very successful event. That due to the skills demonstrated by the participants, the hard work of the many volunteers, the collaboration of MI & local company Virtual Marine and the generous support of event sponsors.



2024 Nautical Skills Competition Group Photo Including Students, Judges and Volunteers.

A separate competition newsletter, with more details, is located on the MMC website.

Newsletter: <https://www.mastermariners.ca/wp-content/uploads/2024/03/2024-NSC-Newsletter.pdf>

February 15th, 2024

On this date, it was time to stop and reflect on the Ocean Ranger Disaster. It has been 42 years since that tragedy occurred, in the early days of our offshore oil industry. Only by reflecting on the tragedies of the past can we seek to improve safety in the future. Let us never forget the lives lost and the lessons learned from this tragic disaster. For those who may not be aware of the details of this incident, here is a summary:

REMEMBERING THE OCEAN RANGER TRAGEDY

Event Summary

On February 15, 1982, the Ocean Ranger, the world's largest semi-submersible drilling unit capsized and sank during a fierce storm on the Grand Banks of Newfoundland. Owned by ODECO and under contract to Mobil Oil Canada, all 84 crew members on board died.

The rig sank after seawater entered its ballast control room through a broken porthole and caused an electrical malfunction in the ballast panel controlling the rig's stability.

Three inquiries, the Royal Commission on the Ocean Ranger Marine Disaster and 2 United States studies, found the capsizing and loss of life was caused by a "chain of events" which resulted from a coincidence of severe storm conditions, design inadequacy and lack of knowledgeable human intervention.



IN MEMORIAM OF THOSE WHO LOST
THEIR LIVES IN THE SINKING OF
"THE OCEAN RANGER"
FEBRUARY 15, 1982

ROBERT ARSENAULT	WILLIAM DUGAS	ROBERT HICKS	JOHN PINHORN
GEORGE AUGOT	TERRANCE DWYER	DERRICK HOLDEN	WILLIE POWELL
NICHOLAS BALDWIN	DOMENIC DYKE	ALBERT HOWELL	GERALD POWE
KENNETH BLACKMORE	DEREK ECOTT	ROBERT HOWELL	DOUGLAS PUTT
THOMAS BLEVINS	ANDREW EVOY	ROBERT HOWLAND	DONALD RATHBUN
DAVID BOUTCHER	ROBERT FENEZ	JACK JACOBSEN	DENIS SVAN
WADE BRINSTON	RANDELL FERGUSON	CLIFF KUHLE	DARVEL REID
JOSEPH HURRY	PETER FOGG	HAROLD LEDREW	RICK SHEPPARD
PAUL BURSEY	RONALD FOLEY	ROBERT LEDREW	FRANK SMIT
GREG CAINE	MELVIN FREID	MICHAEL MAURICE	WILLIAM SMITH (CAN)
KENNETH CHAFF	CARL TRY	RALPH MELROSE	WILLIAM SMITH (USA)
DAVID CHALMERS	GEORGE GANDY	ROBERT MADDEN	TED STABLETON
GERALD CLARKE	GUY GERSEAU	WAYNE MILLER	KENT THOMPSON
DANIEL CONWAY	REGINALD GORUM	GORD MITCHELL	GREG TILLER
GARY CRAWFORD	CYRIL GREENE	PERRY MORRISON	CRAIG TILLEY
ARTHUR DAGG	NORMAN HALLIDAY	RANDY NOSEWORTHY	GERALD VAUGHN
BORMAN DAVE	FRED HARRUN	REN O'BRIEN	WOODROW WARFORD
JIM DODD	TOM HATFIELD	PASCAL O'MILL	MICHAEL WATSON
THOMAS DONLON	CLARENCE HAUS	GEORGE PALMER	ROBERT WILSON
WAYNE DRAKE	RON HEFFERNAN	CLYDE PARSONS	ROBERT WINSOR
LEON DRODDY	GREGORY HICKEY	DONALD PIEROWAY	STEPHEN WINSOR

The 84 names, of the men who lost their lives on the Ocean Ranger, can be found on the Ocean Ranger Memorial. Located on the grounds of the Confederation Building in St. John's, NL. Source:

<https://www.waymarking.com/waymarks/wm6K8K> Ocean Ranger Memorial St Johns Newfoundland

Root Causes

Equipment Difficulty – Engineering and Design Inadequacy

- Port hole located in the Ballast Control room. This broke and allowed water to enter the room causing loss of power
- Poor ballast pump placement – pumps could not be used when Rig tilted
- Lack of water tight integrity in chain lockers
- Lack of davit launched lifeboats

Training – No Training - None of the crew had been adequately trained in stability concepts or the Rig’s ballast control system.

Management System Failures - System, Procedures and Administrative Controls Inadequacy

- **Lack of Operational Control Procedures**
 - Rig continued to drill until onset of storm which delayed preparations (moving to higher draft) for upcoming storm impact
 - No detailed Ballast Control system procedures in the Operating Manual
- **Inadequate Safety Management System - No basic survival training coupled with lack of immersion suits and no means to safely transfer individuals from the Lifeboats to the Standby Vessels in the given sea state.**

Price, J. (2013). The Ocean Ranger Disaster. *Journal of Undergraduate Engineering Research and Scholarship*. Retrieved from <http://journals.library.mun.ca/ojs/index.php/prototype>. Oil Pro. *Oilpro Perspectives: The biggest Oilfield Disasters in History*. Retrieved from <http://oilpro.com/post/810/oilpro-perspectives-the-biggest-oilfield-disasters-in-history>.

March 9th, 2023

The monthly meeting, for March, took place at the Crow’s Nest (13 present) and was also conducted by MS Teams (3 present).

Divisional Master, Captain Jim Parsons, opened the meeting and welcomed all members present.

A call for nominations for assistant Div. Master – Special Events will be sent out to membership and a vote will be held at our next general meeting on 11 April 2024, if more than one member is nominated.

Nautical Science Society: Chris Rafuse and Hayden Landa, MMC NL Div. cadet members, and Nautical Science students, gave a presentation on the reboot of the Nautical Science Society. They have rebooted the society to provide a space for the Nautical Science Community to connect and collaborate.

Nautical Science Society 2024 Executive

- President – Christopher Rafuse
- Vice-president – Hayden Landa
- MISU Liaison – Joyce Ngom
- Treasurer – Nathan Childs

Captain Kris Drodge made a motion for the MMC-NL Div. to financially support the NS Society (to get it up and running) and give a donation of \$500.00. Captain Glenn Fiander seconded the motion. Motion passed unanimously by all members with voting privileges.

Two Term 2 Nautical Science student abstracts were accepted for the October 2024 - International Association of Maritime Universities-Student Forum (IAMUS) in Massachusetts.

- Megan Fiander will present her paper entitled: *Sailing Through Storms: Unveiling the Mental Health Challenges of Seafaring Professionals*.
- Nathan Childs is unable to attend the 2024 conference, but hopefully he will be able to present his paper, *Investigating the Dangers of Confined Space Entry in the Maritime Industry*, at next year's IAMU conference in Chennai, India.

Both Megan and Nathan are developing their papers as part of their Term 2 communications course with Elizabeth Clouter. The plan is for them to present on their papers for the MMC-NL Div. meeting in September.

The US training ship **State of Maine** visit (Maine Maritime Academy): The training vessel **State of Maine** is scheduled to be in St. John's from 8-11 July 2024. The vessel has a combined total of over 200 nautical and engineering cadets and a staff of over 100. A discussion was held on the MMC-NL Div. hosting some of the officers and senior cadets at the Crow's Nest.



March 9th Monthly Meeting

The Canadian Marine Careers Foundation (CMCF), in partnership with Master Mariners of Canada (MMC), will be hosting its inaugural IMAGINE MARINE CONFERENCE for the marine shipping industry from 2-3 October 2024 in Ottawa, Ontario. This national workforce development conference will bring together marine shipping stakeholders, speakers and HR/EDI experts and resources to share best practices, inspire ideas, and develop strategies and solutions to elevate marine's recruitment and retention game in the face of increasing talent shortages in Canada's competitive labour marketplace. Sponsorship package will be released shortly.

New Business:

1. **Fatigue E-Course:** Transport Canada Marine Safety & Security has launched the Fatigue Management at Sea e-course, produced in association with the Canadian Centre for Occupational Health and Safety (CCOHS). This online learning is available at no cost to all Canadian seafarers with a valid Candidate Document Number (CDN), courtesy of Transport Canada. Enrolment is also available for purchase by the public. At present, this course is voluntary. Link to the course: [Managing fatigue at sea in Canada](#)
2. **Nautical Science Students year-end BBQ:** Captain Jim Parsons is working on a plan in which the MMC-NL Div. and the Nautical Science Society will organize Nautical Science Students year-end BBQ. The tentative plan is for Thursday, 30 May 2024.
3. **Seafarers Wellness Center:** Captain Chris Hearn gave an update on the plans to bring Seafarers Wellness Center to Newfoundland and Labrador. On 26th September 2023, the Fisheries and Marine Institute of Memorial University hosted a seminar to mobilize community supports for a seafarers' welfare centre in St. John's. Since this time a committee has been formed and Captain Hearn is serving as Chair. There is a lot of work to be done particularly in the areas of:
 - Finance
 - Location
 - Governance
 - Legal

The plan is to give a presentation at an upcoming MMC-NL meeting, hopefully in May.

4. **Nautical Science Essay Contest:** Captain Ray Dalton recently delivered a safety-oriented presentation to local safety company K&D Pratt, who in return has offered a \$500 prize for an essay on shipboard safety awarded to a Nautical Science Student registered as a cadet member of the MMC-NL Div. Details will be given to the Nautical Science Students and the winner will be announced at the Nautical Science Students year-end BBQ.

Membership update: Captain Richard Edwards (Assistant Div. Master – Membership) was absent from the meeting but Captain Phil Lind (National – Membership) gave an update. There was some confusion on who was to receive the membership applications so Captain Edwards and Captain Lind will discuss how to proceed in the future.

March 15th, 2023

NL Division members, staffed a MMC booth at the **Skills Canada - Annual Skills Career Day 2024**. Held at the Prince Phillip Drive Campus of the College of the North Atlantic.

March 15th MMC Booth at Skills Canada-Career Day



Nautical Trivia

What is the world's largest icebreaker?

Answer: Looking solely at icebreakers, not some of the larger icebreaking cargo vessels, the Russian LK-60Ya (Project 22220) class of icebreakers. Starting with the **Arktika** (delivered 2020), then **Sibir** and **Ural**. Arktika & Sibir taking the names of previous icebreakers, now decommissioned. **Yakutiya**, **Chukotka** and **Leningrad** are at various stages of construction. A planned 7th has not yet been laid down.

Length: 173.3m, Breadth: 34m, Draft: 9m to 10.5m, Displacement: 33,530t, Crew: 75, Main Propulsion: 81,000hp, Speed: 22 knots.

They are propelled by 2 nuclear reactors which produce steam for 2 turbogenerators. These, in turn, provide power for 3 x 27,000hp propulsion motors. Each turning a 6.2m diameter fixed pitch propeller (weighing about 60t each). The reactors provide power for approximately 7 years, for each replenishment of the uranium that fuels them.

Stated icebreaking capability is to move at a continuous speed of 1.5 -2.0 knots in 2.8m thick ice (at 10m draft). Costs, from online sources, indicate \$1.16 billion US for Arktika and \$720 million US (\$983 million CAD) for Chukotka. How accurate those figures are, unknown.

The Russians are aiming to keep the Northern Sea route open, year-round. Thus, the requirement for a large number of expensive and highly capable icebreakers. Nuclear icebreakers have the advantage of having virtually unlimited range. Diesel powered icebreakers are always faced with balancing high fuel consumption versus the availability refuelling locations in the high Arctic.



Icebreaker Arktika

Source: https://dmitry-v-ch-l.livejournal.com/350362.html?utm_source=embed_post

Note: Additional photos can be found at the above link.

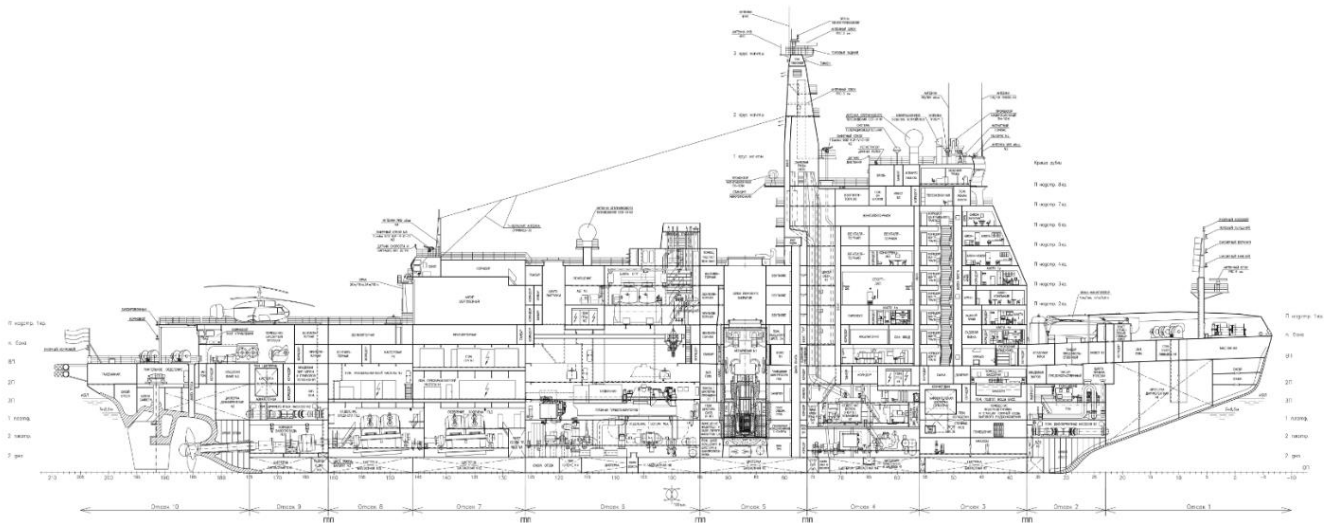


Model of Project 22220 Icebreaker

Source: <https://finescale.com/product-info/kit-reviews/2022/02/workbench-review-zvezda-1-350-scale-arktika-russian-icebreaker-plastic-model-kit>

Note: Additional views can be found at the above link.

Below, you will find a profile plan of the Project 22220 icebreaker. The reference link, for the PDF plan, will take you to a Russian web page containing additional PDF plans. Scroll down the page to see additional plans and photos. Tabs at the top of the page (1 to 72) will provide additional photos. Unless you can read Russian, the text will prove problematic.



Profile Plan Project 22220 Icebreaker

Source: <https://forums.airbase.ru/2014/05/t89633--universalnye-atomnye-ledokoly-proekta-22220.html>

Capable vessels but maybe not quite capable enough to ensure year-round navigation in the Russian Arctic. In early February 2024, Arktika was escorting 2 polar class heavy-lift vessels through the Chukchi Sea. The vessels were carrying production modules from a building yard in China to the site of a new Russian LNG project. However, challenging pack ice conditions made for slow progress, with the vessels making limited headway for more than a week. During one 24 hour period they covered less than 5 nautical miles (0.2 knots) average. Russian ice charts showed average 1st year ice conditions with 10/10ths coverage. Throw in some multi-year (possible for that area) and perhaps progress would have been stopped entirely. A second icebreaker was dispatched (earlier generation 25,000t/75,000hp nuclear icebreaker) to assist. See for more:

https://gcaptain.com/nuclear-icebreakers-escort-russian-lng-modules-through-thick-arctic-ice/?subscriber=true&goal=0_f50174ef03-104a176e39-139902913&mc_cid=104a176e39&mc_eid=8fb15eb136

Likely realizing that such situations can occur, the next initiative to get to the goal of year-round navigation is reported to already be under construction. In the form a Leader Class, Project 10510 icebreaker. Length: 209m, Breadth: 47.7m, Draft: 13m, Displacement: 69,700t, Crew: 127, Main Propulsion: 160,923hp, Shafts: 4, Speed: 24 knots.

Stated icebreaking capability is to move at a continuous speed of 10 - 11 knots in 2.0m thick ice. Costs, from online sources, indicate \$1.8 billion CAD. How accurate this figure is, unknown. Planned 2027 delivery date is likely to be delayed.

Whether this massive icebreaker/multiple icebreakers of this class will be enough to ensure year-round passage through the Northern Sea Route, only time will tell.



3D Images of Project 10510 Icebreaker

Source: <https://www.renderhub.com/citizensnip/icebreaker-lider-project-10510>

Note: Additional views can be found at the above link.

In the News

Polar Icebreaker

On the theme of icebreakers, the long awaited replacement for Canada's largest icebreaker (CCGS Louis S. St.-Laurent, delivered in 1969) seems to be getting closer to commencement of build. ABB has secured a diesel-electric propulsion system contract, with Seaspan's Vancouver Shipyards, for the first of the Canadian Coast Guard's new-generation polar icebreakers. The vessel will have 34MW of propulsive power provided by a single shaft line (conventional fixed pitch propeller) and twin Azipod® units (azimuthing propulsion units). Under the National Shipbuilding Strategy (NSS), Seaspan will construct the first (of two) new polar class icebreakers for CCG. The other, to be built by Chantier Davie Canada Inc. shipyard in Quebec City, will replace CCGS Terry Fox. An article, on the Terry Fox, can be found in the Oct.–Dec. 2023 Deck Log.

The history of this project goes back to 2008. The Government of Stephen Harper announced a plan to build a single polar icebreaker, to be named CCGS John G. Diefenbaker (cost \$700 million). The government revised its estimate to \$1.3 billion in 2013. At that point, the construction contract for the icebreaker had been awarded to Seaspan. Along with six other vessels being built under the NSS.

In 2021, the government decided to revise plans and build two polar icebreakers (cost \$7.28 billion). The Seaspan vessel to start build in 2023-2024 (delivery 2029-2030) & the Davie vessel to start build in 2024-2025 (delivery 2030-2031). A Dec. 2021 Parliamentary Budget Office report, found at: <https://distribution-a617274656661637473.pbo-dpb.ca/d8c1cae885be92c964a0216e28e5ff1867e56bc0d63d14af361d24a6ef94cd81> indicates that delaying start of construction, by one year, would increase costs by \$235 million. A two year delay would increase costs by \$472 million. Parliamentary Budget Officer (Yves Giroux) indicated, reference: <https://www.ctvnews.ca/politics/skyrocketing-shipbuilding-costs-continue-as-estimate-puts-icebreaker-price-at-7-25b-1.5709930>, that part of the cost increase was due to the decision to build two icebreakers instead of one. The government having announced, without warning in May 2021, the addition of another ship to its plans. He told reporters that the plan, to have the two ships built at different shipyards, will add between \$600 million and \$800 million to the overall cost. "In naval construction projects, there are economies of scale and learning factors that would be accrued should the contract be to the same shipyard," Giroux said. Splitting the contract, he said, "will not lead to these natural learning improvements." At the time Davie had not been formally accepted as part of the NSS.

From this site (modified Feb. 2024): <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/mer-sea/sncn-nss/polaire-polar-eng.html>

- “As a result of successful negotiations, Canada entered into an Umbrella Agreement with Chantier Davie on April 4, 2023. Contract negotiations are underway with Chantier Davie to support the construction of the second Polar Icebreaker for the Canadian Coast Guard.”
- “In May 2023, VSY (Seaspan) cut steel on a ‘prototype block’ for the Polar Icebreaker, marking a critical step in the shipyard’s work on the project.”
- “VSY will continue to advance the design work for one of the two Polar Icebreakers.”
- “Canada will initiate discussions on design work with CDCI (Davie) for the other Polar Icebreaker. The exact build schedule and cost will be negotiated and finalized during the individual contract negotiations.”

Standby for the next budget update.



CCG Polar Icebreaker

Source: <https://www.seaspan.com/seaspan-shipyards/shipbuilding/polar-icebreaker/>

Note: Additional views can be found at the above link.

The new icebreakers are not nearly as large and powerful as the Russian vessels described above. However, they are larger, more powerful and more capable than those that they will replace. There is also not a desire/need to keep the Northwest Passage open for year round shipping. Nor is there a requirement for CCG to operate year round in the high Arctic. See table below, for comparison of vessel particulars.



Comparison between CCGS Louis S. St-Laurent, USCGS Healy and CCG polar icebreaker.

Source: <https://maritimemag.com/en/davie-polar-icebreaker-program-confirms-design-and-engineering-partners/>

	Length	Breath	Displacement	Power
New CCG Polar Icebreakers	158.2m	28m	25,995t	45,600 hp
CCGS Louis S. St-Laurent	119.8m	24.4m	15,324t	27,000 hp
CCGS Terry Fox	88m	17.8m	7,200t	23,200 hp
Russian Project 10510	209m	47.7m	69,700t	160,923hp
Russian Arktika	173.3m	34m	33,530t	81,000hp
New USCG Polar Icebreakers	140m	27m	23,300t	45,200 hp
USCG Polar Star	122m	25.5m	13,623t	75,000hp

Icebreaker Comparison Chart

South of the border, the USCG is also faced with aging heavy icebreakers. USCGS Polar Star was delivered in 1976. It requires considerable maintenance to carry out a single deployment each year. That is icebreaking support for the resupply of the US base in Antarctica. Sister ship, Polar Sea, has been decommissioned and is being used for spare parts to try to keep Polar Star running, until new vessels can be delivered. Three new polar security cutters (polar icebreakers) are on order, from a single US yard. The first is due for delivery in 2028 but that may be delayed. Like the CCG (see article in the in the Jul.–Sept. 2022 Deck Log), the USCG is looking at purchasing a used icebreaker to fill the gap until the first new icebreaker is delivered.

The Polar Star and Sea used fuel hungry gas turbines (75,000hp) for heavy icebreaking. For transit and light icebreaking they used diesel electric propulsion (18,000hp). For the three new icebreakers, diesel-electric

propulsion has been selected. The propulsion system layout, with approximately the same horsepower, is as will be found on the new Canadian polar icebreakers.

In 2021, estimated costs was about \$1.3 billion for the first icebreaker, \$921 million for the second and \$1 billion for the third. USCG is aware that those costs are likely to rise. The amount is unknown. One US government shipbuilding program has had 51% growth since a 2021 budget estimate.

The new American polar icebreakers are very similar to the those that Canada will have built. In 2021, the estimate for first two American icebreakers, built in a US shipyard, was approximately \$3 billion CAD. In 2021, the two Canadian icebreakers were estimated at \$7.28 billion. Once again, the cost of building vessels in Canada comes with a significant premium over other jurisdictions. In this case, over double the cost of ships built in the US. Not a country known for low shipbuilding costs.



Model of new USCG Polar Security Cutter.

Source: <https://chuckhillscgblog.net/wp-content/uploads/2021/08/psc-port-beam.jpg>

Return of the Titanic

Australian businessman Clive Palmer says he is ready to build Titanic II, for a 2027 introduction. The plan was originally launched in 2012 but ran into problems. The project is now back underway. “Blue Star Line will create an authentic Titanic experience, providing passengers with a ship that has the same interiors and cabin layout as the original vessel, while integrating modern safety procedures, navigation methods, and 21st-century technology to produce the highest level of luxurious comfort,” Palmer told an audience gathered to hear his announcement at the Sydney Opera House.

The Titanic II would be approximately 56,000 gross tons with nine decks. It will have an overall length of 269m and a beam of 32.2m. Versus the original which was 46,000 gross tons, with the same length, but a narrower beam of 28.19m. The design adds a service deck that would include modern lifeboats, to meet regulations, with other elements of the design also adapted to meet IMO regulations. Instead of boilers and steam turbines, the ship would use modern diesel engines. Drawings show the addition of bow thrusters and azipod propulsion. Palmer promotes the concept as offering passengers “an unparalleled journey back in time.” The plan calls for recreating the interior designs of the Titanic, including its famous grand staircase. Accommodations would be in

835 cabins, including 383 in first class, 201 in second class, and 251 in third (or steerage) class. The total capacity would be 2,435 passengers.

The plan is for a maiden voyage between Southampton and New York, in 2027. No indication whether the voyage is planned for iceberg season in the North Atlantic. Some photos with an iceberg in the frame (at a safe distance of course) would be the desirable outcome.



Titanic II

Source: <https://www.maritime-executive.com/article/titanic-ii-the-ship-of-dreams-palmer-says-he-is-ready-to-move-forward>

Note: See additional info at the above link.

Collisions

On March 26th, 2024 the container ship MV Dali collided with a pillar of the Francis Scott Key Bridge, in the port of Baltimore. The collision caused a large portion of the bridge to collapse. Tragically, six workers, who were on the bridge at the time of the collision, lost their lives. The vessel is still trapped under the collapsed bridge, a large part of the port of Baltimore is shut to vessel traffic, vessels were trapped in port and a major transportation artery was destroyed. The suspected cause of the collision (not yet confirmed) was a vessel blackout.



M/V Dali shown with the collapsed Francis Scott Key Bridge.

Source: <https://gcaptain.com/baltimore-bridge-salvage-and-wreck-removal-megathread/>



M/V Dali entangled with the collapsed Francis Scott Key Bridge.

Source: https://gcaptain.com/hope-fades-for-lost-baltimore-bridge-workers/?subscriber=true&goal=0_f50174ef03-35e6a66430-139902913&mc_cid=35e6a66430&mc_eid=8fb15eb136

See this site for a seven minute video leading up to the collision and bridge collapse:

<https://www.youtube.com/watch?v=m3Sobolb6c4&t=12s>

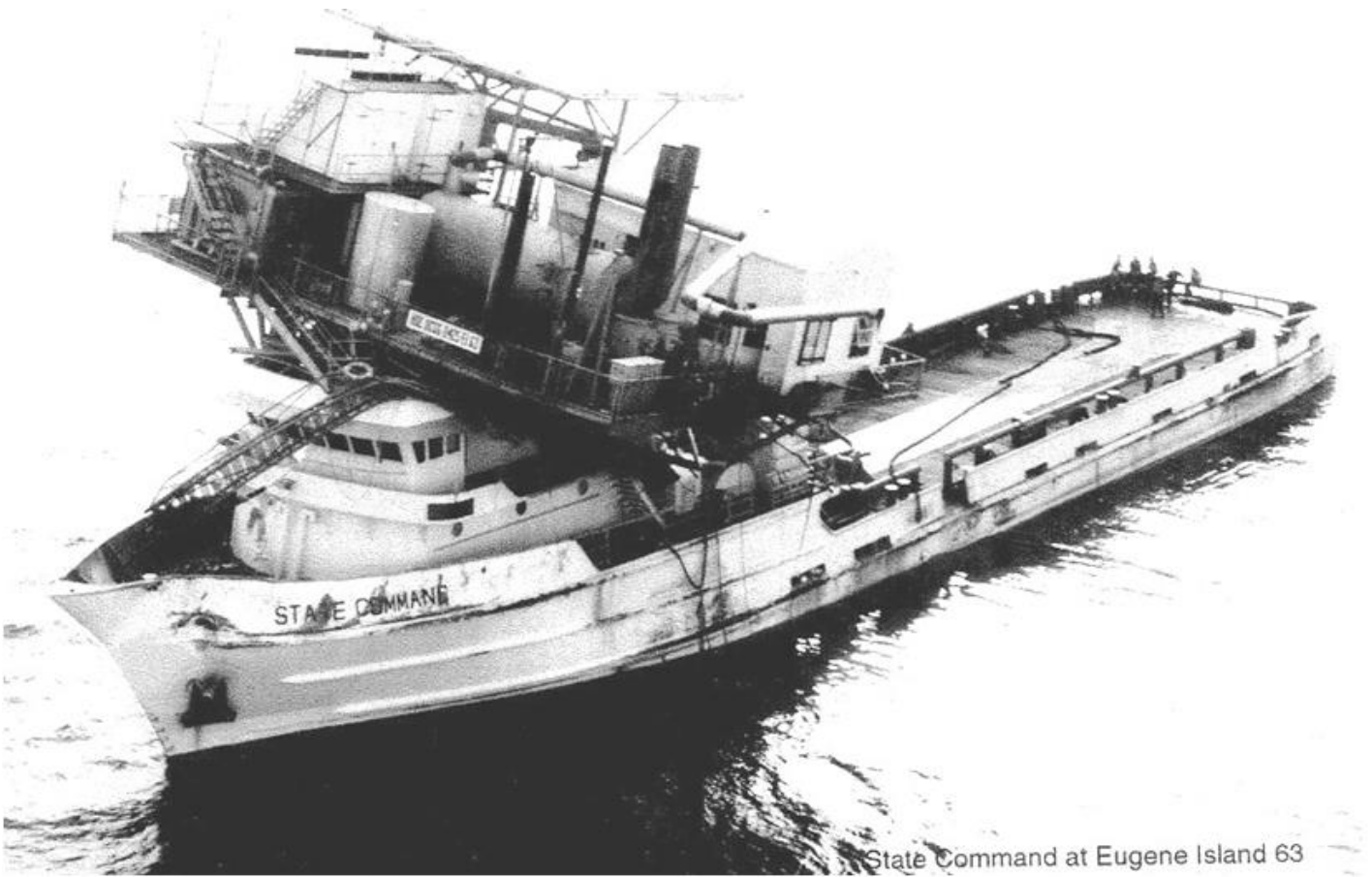
Efforts to salvage the Dali and remove the collapsed bridge sections continue. Shipping traffic, to the port of Baltimore, is not yet fully restored. The economic costs will be in the billions and legal actions have been started.

On seeing this incident, a little research reveals that ship collisions with bridges, and other structures, are not that uncommon. Resulting in either damage to or total loss of the object that the vessel collides with. The following link is for an article that provides description/photos/video of a container ship colliding with (and bringing down) three container cranes, while on approach to a dock in Turkey. Occurring just a few days before the Dali collision. <https://maritime-executive.com/article/video-ym-containership-takes-out-cranes-while-docking-in-turkey>

The photo on the next page was brought to my attention. Can find no details as to what exactly happened. The website doesn't provide much detail. From the link, under the photo:

"Pictured below is the State Command arriving in Morgan City (~1973?) topped by a platform deck. Fortunately, the platform was unmanned and there were no injuries to vessel personnel. You could say this was the first floating production platform."

Seems the vessel collided with a production platform. Taking out the support legs of the platform and depositing the topsides on monkey island. There appears to be some damage to the forward bulwarks. Among other things, there are obviously stability issues here. However, seems the vessel remained stable enough to get back to port.



Supply vessel State Command, arriving in Morgan City, with platform topsides onboard.

Source: <https://budsoffshoreenergy.com/2021/09/>