



Arctic Marine Research Capabilities Committee (AMRCC)

Carin Ashjian, Chair

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What is the AMRCC?

- Special UNOLS Committee established by UNOLS Chair and Council at the request of the NSF, ONR, and USARC
(University National Oceanographic Laboratory System)
- *Purpose:* Review and refresh science missions and affiliated science mission requirements of future Federal icebreakers operating in the Arctic Ocean and other northern polar regions
- *Primary Tasks*
 - Assess whether existing SMs and SMRs meet current and emerging needs for Arctic research on Federal icebreakers
 - Identify any additional SMRs required to ensure that Federal icebreakers will meet the needs of the Arctic marine research community for the next 30 years
 - Review and refresh SMRs for (a) any commercially available polar icebreaker that may be acquired or procured and refit for operation by the Federal government; and (b) the conceptual design of future “medium” or “heavy” federal-flagged and owned icebreakers. - THIS IS A RANGE OF SHIPS AND DIFFERENT FROM OTHER SMR DEFINITIONS

Committee Membership and Agency Liaisons

Committee

- Dr. Carin Ashjian, WHOI, Chair
- Dr. Lee Cooper, UMCES
- Dr. Laurie Juranek, OSU
- Dr. Jim Swift, SIO
- Dr. Jeff Welker, UAF
- Dr. Emily Eidam, OSU
- Dr. Laura Whitmore, UAF
- Dr. Christopher Cox, NOAA
- Dr. Bernard Coakley, UAF
- CDR William Woityra, USCG
- Ethan Roth, UAF
- Brendan Mendenhall, SIO

Liaisons

- Dr. Jamie Austen, Dr. John Farrell (for USARC)
- LT Christine McCulla (USCG)
- Others when they can make it

What has happened so far?

- Call for nominations in spring of 2024
- Committee established June 2024
- Kickoff Zoom meeting July 2024
- Relevant documents collected summer-early fall
- Second Zoom meeting Sept. 24
- First hybrid (committee in person) workshop Nov. 14-15, Seattle WA
 - Heard agency perspectives
 - Worked on community questionnaire
 - Set up working group for operators' questionnaire
 - Start selecting Science Missions for which to identify Requirements
 - Other discussions
- Third Zoom meeting December 2 (work on Questionnaire)
- This Community Meeting at 2024 AGU Fall Meeting, Washington DC

“New” federal ships that will be operated in the Arctic

USCGC WAGB21, formerly the Aiviq (owned by Edison Chouest



- Commercially available polar icebreaker (CAPI)
- Purchased by the USCG
- To be homeported in Juneau, Alaska following upgrades to the port
- Requires several years of upgrades to become a “Coast Guard” ship
- Potential opportunity to incorporate some science capability

“New” federal ships that will be operated in the Arctic

- USCG Polar Security Cutters -
 - Up to 3 Heavy Icebreakers (460’ long, 23k ton displacement, 45k shp vs. 420’ long, 16k ton displacement, 30k shp for Healy)
 - To be homeported in Seattle WA following port upgrades
 - Build of first ship (Polar Sentinel) contracted to VT Halter Marine (now Bollinger) on 4/23/19
 - Build of second ship (TBD) contracted to Halter/Bollinger on 12/29/21
 - Lots of delays, latest estimate of 1st ship no earlier than 2029
 - Still opportunity to recommend science capabilities
 - USCG Arctic Security Cutters-
 - Medium icebreakers
 - No firm plans yet
- Sources: Congressional Budget Office; USCG

Some emerging directions

- Consider science capabilities as “critical” vs. “nice to have”
- Consider how science capabilities could be modular and how the ships would need to be able to accommodate the modules (e.g., lab vans, portable winches)
- Consider what science our other assets cannot do
- Be forward looking – what are the science directions that will drive our needed capabilities over the next 30 years

What's next for the AMRCC?

- Community questionnaire –early December
- Community meetings to relay information and collect input:
 - AGU Meeting, December 11, 1230-1330, Westin Hotel, Washington DC
 - Alaska Marine Science Symposium, January 31, Anchorage AK
 - Arctic Science Summit Week, week of March 24, date TBD, Boulder CO
- Second in person workshop in April 2025

Questionnaire

<https://qrco.de/bfcZWV>



Also will be on UNOLS Web Site (www.unols.org)

We seek input on some broad areas

- What are the Arctic marine science questions of the next 30 years?
- What research capabilities will we need in order to address these questions?
- What new sampling capabilities do you see the ships of the future being able to support?

How can you reach us?

- Carin Ashjian, Committee Chair:
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- Doug Russell, UNOLS Executive Secretary
doug@unols.org

Questions?

