



Regional Class Research Vessel (RCRV)



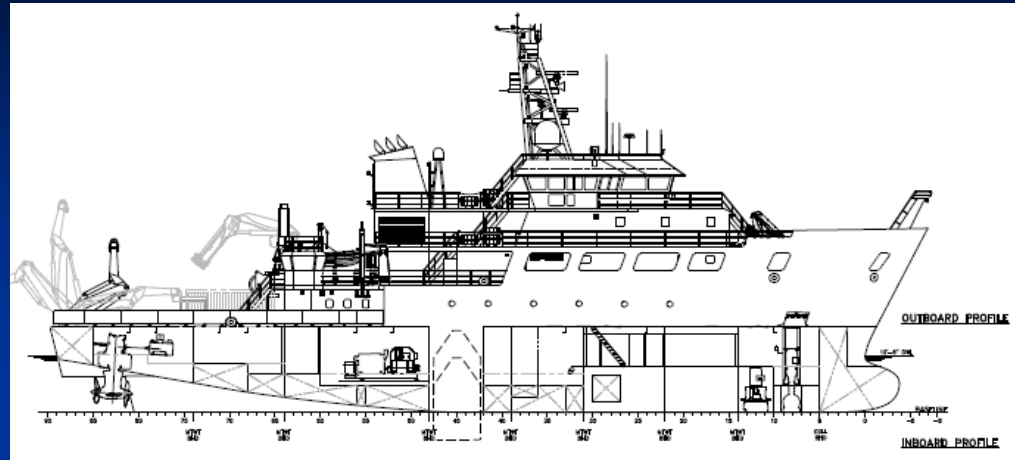
UNOLS Meeting

November 1, 2018

Brian Midson



Regional Class Research Vessel (RCRV)



Development

Design

Construction

Operations

Divestment

- Development – Interagency NSF-NAVSEA, 2004 – 2009, concept design
- Design – Oregon State University, 2013 – 2017, design refresh
- Construction – Gulf Island Shipyards, 2017 – 2023, depending on number
- Operations – 30-year minimum expectation
- Divestment – Sale of vessels when no longer needed



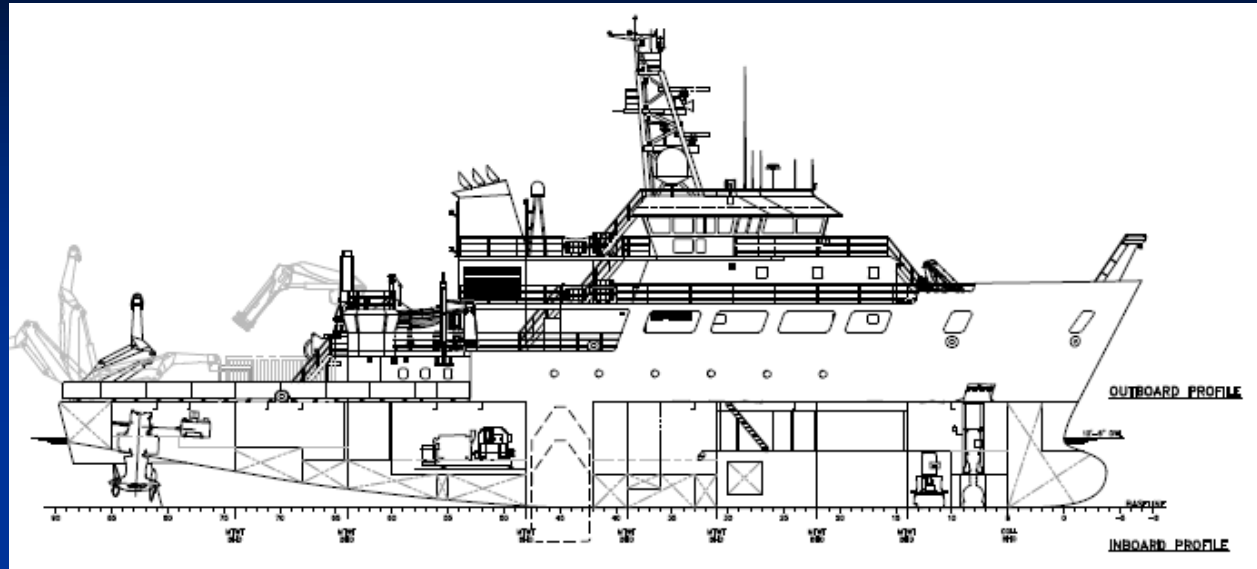
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- Design “refresh” included:
 - Dynamic positioning
 - Lengthening, increased working deck and interior space
 - Integrated shallow water Multibeam acoustic and sub-bottom profiling
 - Low Underwater Radiated Noise
 - State-of-the-art science handling systems and high bandwidth communications
 - Environmentally friendly “green ship” technologies
 - “Datapresence” operation model provides real-time, open access, data stream



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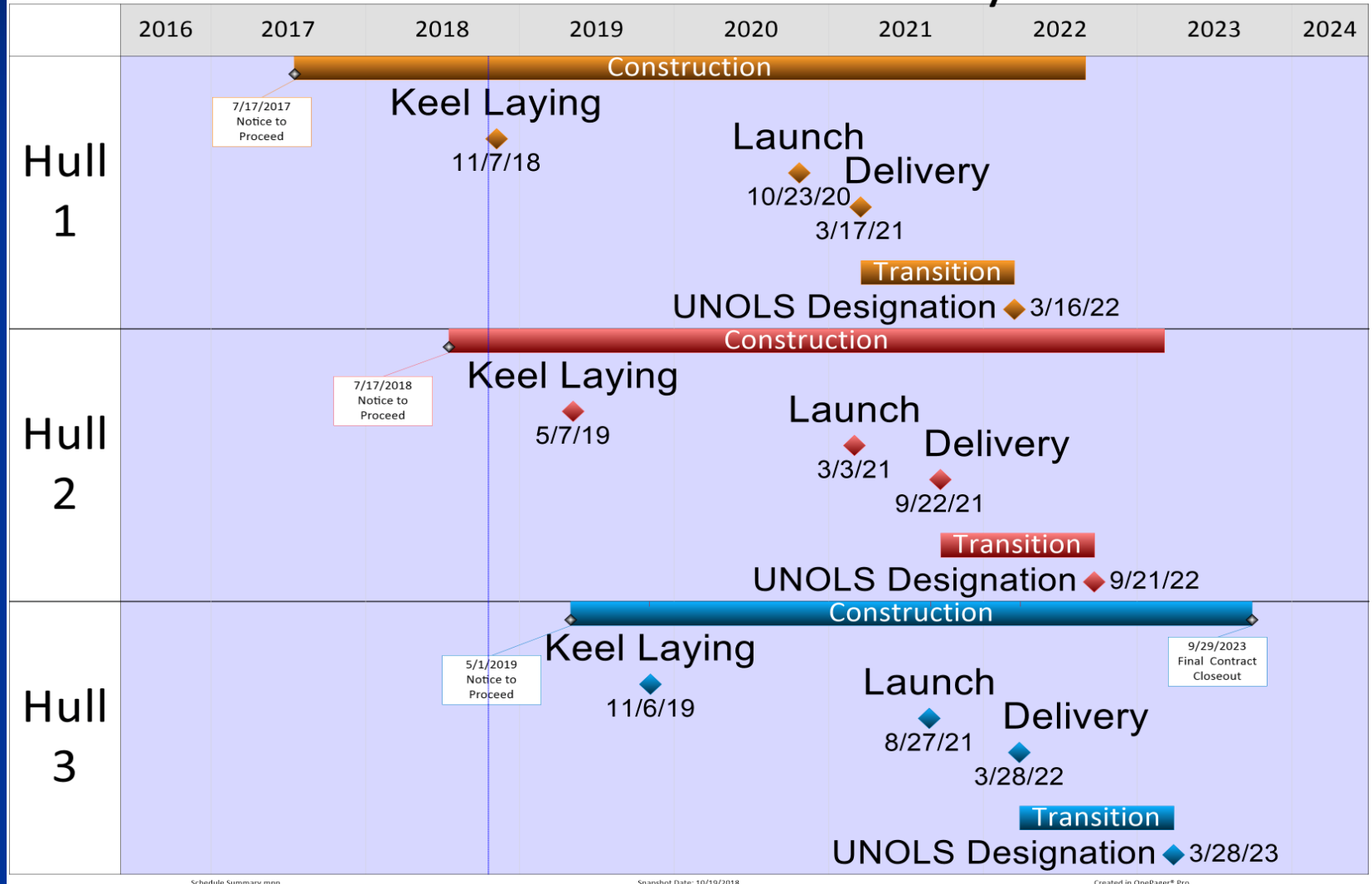


- Construction – started in July 2017
 - FY 2017 \$121M NSF awarded OSU to start RCRV-1
 - FY 2018 \$88M NSF awarded \$88M to OSU to start RCRV-2
 - Keel Laying for RCRV-1, November 2018
 - Deliveries in 2021, 2021 and 2022
 - One year of sea trials and science verification before operations commence



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RCRV Schedule Summary





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■ Operations –

- Oregon State University to operate RCRV-1
- East Coast Consortium, led by URI, to operate RCRV-2
- RCRV-3 operator to be solicited if construction funds appropriated
- Operators involved from DVT through transition to operations
 - Will assist in region-specific requirements
 - Improve vessel familiarity



Community–Driven Science Mission



Sea Change, 2015–2025 Decadal Survey of Ocean Sciences: Science Priorities

- ✓ Sea level change
- ✓ Coastal and estuarine oceans
- ✓ Ocean and climate variability
- ✓ Biodiversity and marine ecosystems
- ✓ Marine food webs
- ✓ Ocean basin formation and evolution
- ✓ Geohazards
- ✓ Subseafloor environment



Community–Driven Science Mission



Features to Enable Science

- Dynamic Positioning, DP-1
- ROV compatible
- UAS Compatible
- Berthing van option
- Six-foot drop keel
- High bandwidth and Datapresence
- Acoustically quiet
- Morale and fitness



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Green Features

- EPA tier 4 engines
- A biologic marine sanitation device
- A waste heat recovery system
- Low underwater noise
- Variable frequency drives



Comparison of Ocean Class to RCRV



■ Ocean Class (OCRV)

- R/V *Sally Ride*
- R/V *Neil Armstrong*
- 238 ft.
- ~3000 tons displacement



■ RCRV

- 199 ft.
- ~1500 tons displacement





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<http://ceoas.oregonstate.edu/ships/rcrv/>