

# School Ship Re-Cap / NSMV Update TRB Marine Board



7 May 2019

# Current School Ship Fleet

	School	Year Built	Age (2018)	Year Converted	Cadet Capacity	Planned End of Service Life	Certificate of Inspection (USCG)/ Classification Inspection (ABS) (Next Special Survey)	Propulsion Type
<b>EMPIRE STATE</b>	SUNY Maritime	1962	57	1989	666	2019/TBD	May 2019//Dec 2019	Steam
<b>KENNEDY</b>	Massachusetts Maritime	1967	52	2003/2009	600	2025	January 2019//May 2018	Steam
<b>STATE OF MAINE</b>	Maine Maritime Academy	1990	29/ 36 engine	1997	244	2025	May 2019//June 2022	Diesel
<b>GENERAL RUDDER</b>	Texas Maritime Academy	1984	35	1992	50	2035	May 2018//June 2019	Diesel
<b>GOLDEN BEAR</b>	California Maritime Academy	1989	30	1996	295	2035	March 2019//March 2019	Diesel
<b>STATE OF MICHIGAN</b>	Great Lakes Maritime Academy	1985	34	2002	64	2045	May 2019//July 2020	Diesel

- **Plan to replace the oldest ships first while using all the MARAD assets to accommodate all the training needs until the fleet is fully recapitalized**
- **All six State Maritime Academies are currently included in this planning process and have been over the past 5 years**

# Purpose

## ○ Recapitalization of the Training Ship Fleet

- A purpose built NDRF vessel to support the licensing of U.S. Merchant Mariners and provide Federal response capabilities for humanitarian assistance/disaster relief
- Standardize design – reduces construction and operating cost, allows for configuration management, and provides consistency across the training platforms
- Time sensitive priority - supports core DOT / MARAD missions
- MARAD, working with Federal partners and industry, investigated all recapitalization options and the data shows that new construction is the least expensive and best value

## ○ National Security Multi-Mission Vessel (NSMV)

- Designed to maximize capabilities and minimize acquisition/life cycle costs
- Provide improved quality of training, using modern systems and equipment and incorporating modern teaching and training facilities
- Accommodates current and future Cadet capacity demand for at-sea training
- Designed to meet SOLAS requirements as a Special Purpose Ship
- Compliant with all environment standards
- Incorporates design features to enhance response capabilities, and to accommodate modular configuration to support mission specific functions, providing maximum flexibility at the lowest impact and cost

# NSMV Basis of Design

## ○ Training Ship Mode

- Normal Service
- Up to 600 cadets and 100 officers, faculty, staff & crew
- Primarily operate on training cruises of about 60 days duration, one or two cruises per year
- Frequently operate at cruising speed of about 12 knots (one engine room)
- Remaining time at the SMA pier for training purposes with reduced crew and ship services in operation

## ○ Emergency Support Function - Humanitarian Assistance/Disaster Response (HA/DR)

- Enters this service when called upon by U.S. government (to support FEMA or other federal agencies) for HA/DR mission
- Surge up to 760 persons living onboard by doubling up some of the staff cabins, up to 1000 persons onboard at any one time (including transients)
- May transit to load supplies and personnel and then transit to site at up to design speed of 18 knots
- Primary mission time is in port providing berthing and command and control functions. Command/Control spaces should be able to be secured
- Require consumables storage (food, fresh water, gray and black water) for periods of time per NSMV Requirements

# NSMV Capabilities & Particulars



## ○ Accommodation

- Training Ship Mode – 600 cadets, 100 officer, faculty, staff & crew
- Surge Capacity for Humanitarian Assistance/Disaster Response missions
  - Food Storage for 60 days
  - Fresh Water Storage for 14 days

## ○ Teaching & Training

- Multiple Classrooms
- Workshops for Cadets
- Lab/Training areas for Cadets
- Training Bridge
- Navigation Lab
- Large Multi-Purpose Space

## ○ Emergency Response (HA/DR) Capabilities

- RoRo space with Side Ramp
- Cargo Crane
- Container and Cargo Stowage on Main Deck
- Capability for Modules (such as medical) on Main Deck
- Helicopter Landing Capability
- Command & Communications Suite
- Enhanced Medical & Treatment Spaces
- Berthing spaces available for use by HA/DR personnel

## ○ Principle Dimensions

- Length 159.85 m (524'- 5")
- Beam 27.0 m (88'- 7")
- Depth 16.8 m (55'- 1.5")
- Design Draft 6.5 m (21'- 4")

## ○ Propulsion, Speed & Consumption

- Diesel Electric – 4 main engines divided between 2 engine rooms
- Installed Power – 15,700 kW Main Engines
- Full Speed – 18 knots with 15% sea margin – 4 engines
- Cruising Speed – 12 knots with 2 main engines in one engine room
- Uni-fuel for simplicity and operation in the US ECA – MGO only

## ○ Range

- 11,000+ miles at 18 knots

## ○ Maneuvering – Docking without tugs

- Bow Thruster – normal maneuvering and azimuthing type for “Take Home” power
- Stern Thruster
- Flap type rudder – improved maneuvering

# Current Status of the NSMV Program

- MARAD has a detailed guidance design for new construction, based on the original requirements document, created in coordination with the SMAs and the Interagency
- MARAD plans to contract for a Vessel Construction Manager which will contract with a shipyard for two NSMV with priced options for three additional ships, which can be exercised based on future appropriations
- In the final phase of source selection for the Vessel Construction Manager
- Working to finalize with USCG and ABS the Design Basis Agreement for the Special Purpose Ship/Public Nautical Schoolship NSMV
- Funding –
  - FY16 & FY17 funded for design
  - FY18 funded for one vessel
  - FY19 funded for one vessel
  - President's FY 20 budget requests a third ship
- MARAD will continue to plan for the different scenarios to maintain acceptable at-sea training capacity sharing for all the SMAs, until such time as appropriations and guidance for sufficient capacity are provided by the Administration and Congress

# Milestone Schedule

(Pending)

<u>Milestone</u>	<u>Date Complete</u>
VCM Contract Award	3 <sup>rd</sup> Qrt FY 2019
VCM's Shipyard RFP	3 <sup>rd</sup> Qrt FY 2019
VCM's Shipyard Contract	anticipated 2019
Keel Laid	anticipated 2020
Delivery 1 <sup>st</sup> Vessel	anticipated 2022
Delivery 2 <sup>nd</sup> Vessel	anticipated 2023
Delivery 3 <sup>rd</sup> Vessel*	anticipated 2024

\* Subject to appropriations

\*\* Precise dates and cost will be available upon Shipyard Contract Award; anticipated by the end of 4<sup>th</sup> Qrt FY 19