



Ballast Water Management General Overview

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Hamburg
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Copenhagen
26 April 2016

Istanbul
27 & 28 April 2016

Monaco
3 May 2016

BWM Convention Status

- Entry into Force – 12 months after ratification by 30 States representing 35% of World Tonnage
- IMO Press Briefing (15 January 2016) – “Criteria for entry into force of BWM Convention not yet reached” **AND NOW AFTER MEPC 69??**
 - 35 % of World Tonnage
 - Needed – ? % of World Tonnage
- Announced preparations for ratification (% tonnage):
 - Argentina – 0.05%
 - India – 0.82%
 - Panama – 18.63%
- Tentative Ratification (% tonnage):
 - Belgium – 0.46%
 - Singapore – 6.58%
 - Finland – 0.14%
 - Italy – 1.39%
 - Malta – 4.81%

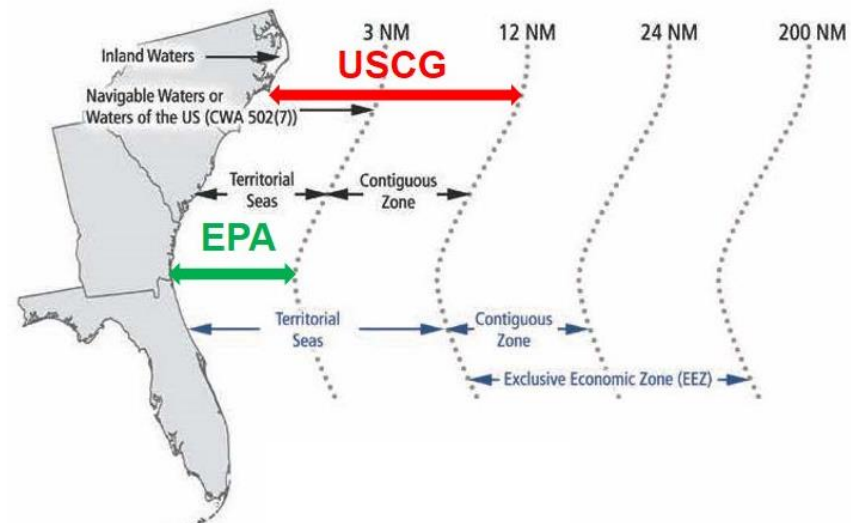
BWM Convention Implementation Schedule

- 28th IMO Assembly resolution adjusted the enforcement schedule of the BWM Convention to align with the International Oil Pollution Prevention Renewal Survey
- Upon EIF, vessels are to comply with Regulation D-1 (Ballast Water Exchange Standard) until the Regulation D-2 (Ballast Water Performance Standard) Compliance Date
- The BWM Convention will need to be amended upon ratification to incorporate an implementation/enforcement schedule that takes into account the Entry Into Force (EIF) date and appropriate time constraints for purchasing, installing, and commissioning a BWMS

Resolution A.1088(28) Enforcement Schedule		
Ballast Water Capacity (m³)	Keel Laying Date	D-2 Compliance Date
All	< EIF	First IOPP Renewal Survey following the date of EIF
All	≥EIF	At Delivery

BWM Requirements in the United States

- The United States has not ratified the BWM Convention and has established independent ballast water regulations
- In the US, ships must be in compliance with:
 - USCG Ballast Water Regulations;
 - US EPA VGP; and
 - Individual State requirements – 16 States have ballast water requirements (California is the most stringent)
- BWMS require new testing and type approval by the USCG
- Compliance dates are based on vessel drydocking



USCG BWM Regulations

- General requirements for Ballast Water Management (BWM) practices, reporting, and recordkeeping
- New requirements for BWMS type approval
- Ballast water discharge standards (BWDS) compliance schedule:

Vessel	Ballast Capacity	Compliance Date
New	All	Delivery
Existing	< 1,500 m ³	First Scheduled Drydocking after 1 January 2016
	1,500 – 5,000 m ³	First Scheduled Drydocking after 1 January 2014
	> 5,000 m ³	First Scheduled Drydocking after 1 January 2016

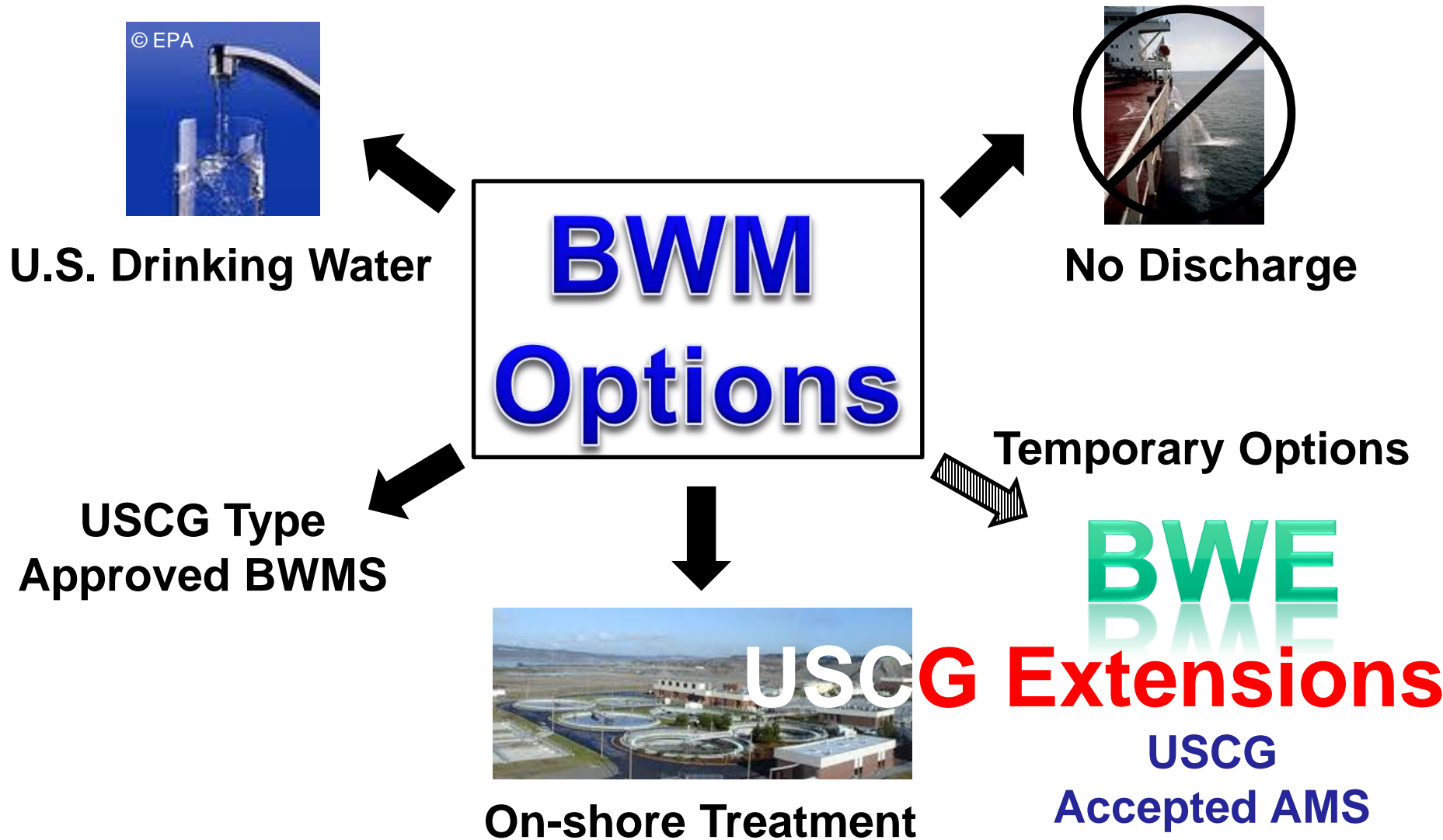
Notes:
New vessel – constructed on or after 1 December 2013
CG-OES Policy Letter No. 13-01, Revision 2 (16 November 2015) - “An underwater inspection in lieu of drydocking (UWILD) is not considered the “first scheduled drydocking”.

Additional Requirements in 2013 VGP

Active Ingredient Discharge Limitations (dependent on technology)	
Biocide or Residual	Limit (Instantaneous Maximum)
Chlorine Dioxide	200 µg/l
Chlorine (Total Residual Oxidants (TRO as TRC))	100 µg/l
Ozone (Total Residual Oxidants (TRO as TRC))	100 µg/l
Peracetic Acid	500 µg/l
Hydrogen Peroxide	1,000 µg/l

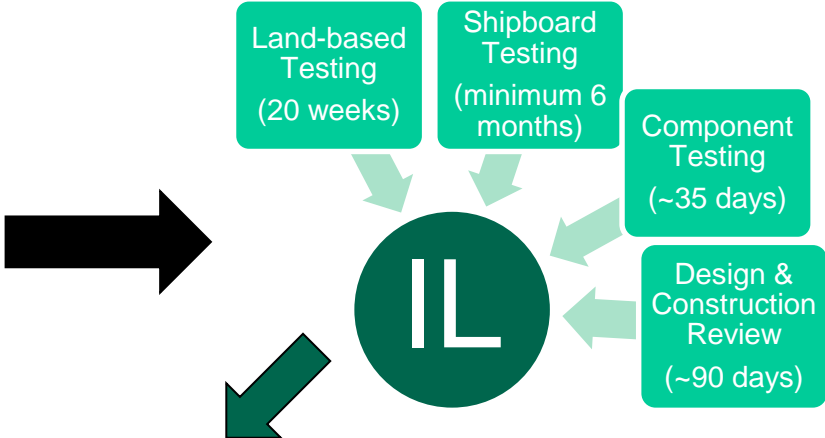
- Training – promptly upon installation of system and significant change to practices or equipment
- BWM Plans – include written training plan and recording training dates and personnel
- Mandatory BWM Practices listed in VGP Section 2.2.3.3
- Monitoring to be submitted with VGP Annual Report

USCG: Ballast Water Management Options



USCG Type Approval Process

Vendor makes a contract with IL



Testing may occur in parallel, but the same exact model needs to be used for all testing.



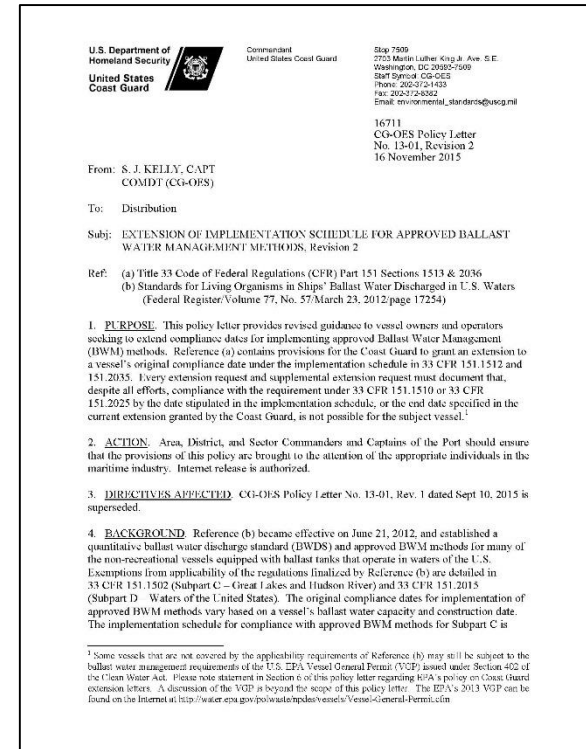
Approximately 18 – 24 months

Estimated earliest USCG type approved BWMS – mid to late 2016

Note: USCG will not force shipowners to purchase first BWMS receiving type approval. Extension requests will continue.

USCG Extensions: Revised Request Policy

- 16 November 2015 – USCG revised policy and process for submitting extensions
- Batch submittal for a fleet of vessels with compliance dates in the same year is now permitted
- Supplemental extension process explained for vessels with existing extensions
- Shipowners are required to submit:
 - Excel-based *Application for Extended Compliance Date under U.S. Coast Guard Ballast Water Management (BWM) Regulations*
 - Statement in email documenting reason for extension request
 - All documentation needs to be written in English and emailed to environmental_standards@uscg.mil. Text in document needs to be in a format that provides optical character recognition (OCR).
- Extension request to be submitted 12 to 24 months prior to compliance date
- USCG clarified that newbuilds may request extensions
- ABS has revised documentation templates



USCG Extensions Granted

- USCG has listed over 5550 approved extension requests.
 - Initial period for Extensions: 1 January 2016, 1 January 2017, or 1 January 2018 – firm date, not related to drydocking
 - As of 18 November 2015, extensions **are being granted to the next scheduled drydocking**
- Shipowners with initial extensions to firm dates will need to wait until 1 year prior to expiration of initial extension to request new extensions to drydocking date
 - USCG will not be revising the initially approved extensions
- Shipowners are waiting approximately 3 to 6 months for USCG approval of extension requests
- USCG has not denied any extensions. Shipowners are asked to be patient for response.
- EPA Issue with USCG extensions still exists. EPA VGP does not include a provision for USCG extensions. EPA published Enforcement Memorandum with “Low Priority Enforcement” statement.

Application for Extended Compliance Date under U.S. Coast Guard Ballast Water Management (BWM) Regulations										
COMPANY INFORMATION										
Requesting Co.:										
Name of Contact:										
Address 1:										
Address 2:										
City:										
State/Country:										
Postal Code:										
Email addresses:										
Date submitted: (format: MM/DD/YYYY)										
VESSEL INFORMATION										
Vessel Name(s) (add more rows if needed)	M/O or Vessel No.	Owner, or type "Same" if Name is "Requesting Co." entered above	Ballast Water Capacity (m ³ only)	Constructed Date (as defined in 33 CFR 151.1554 or 151.2005) (MM/DD/YYYY)	Original Compliance Date (MM/DD/YYYY)	Next Scheduled Drydocking (MM/DD/YYYY)	Subsequent Scheduled Drydocking (MM/DD/YYYY)	Is this Supplemental Issue? (Yes/No)	For USCG use only: Vessel Extension Request #	

Extensions after USCG BWMS Type Approval

- USCG extensions will be granted until:
 - Sufficient number of suitable BWMS have received USCG type approval
 - Sufficient, suitable models are available
 - Drydock availability is not limited
 - Issues from installation and commissioning are resolved.
- Shipowners need to document:
 - Evaluation of BWMS and discussions with BWMS vendors for future and supplemental extension requests
 - Suitable BWMS
 - Issues with availability of models from BWMS vendors
 - Lack of drydocking space
 - Problems encountered during purchasing, installation and commissioning
- Shipowners will need an operable BWMS at the expiration of all requested and approved extensions

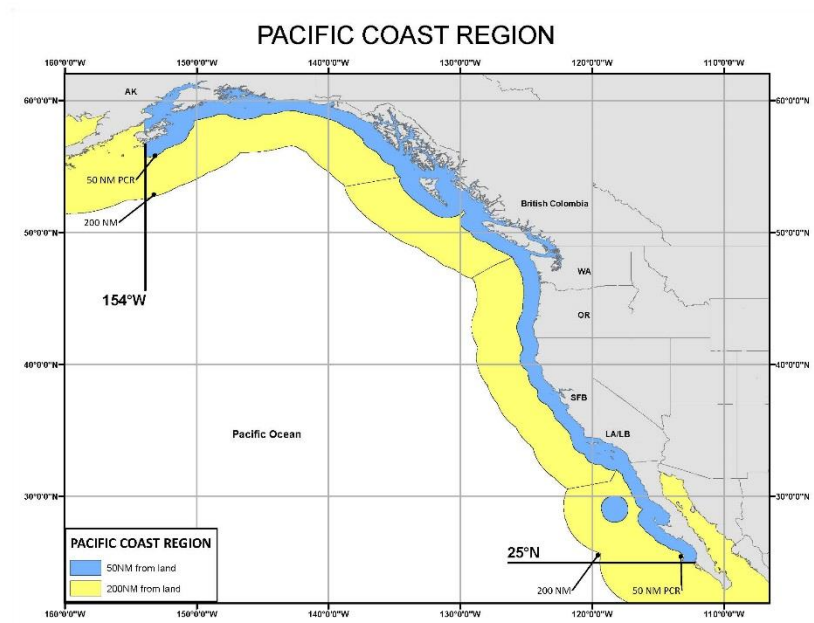
Shipowner Next Steps

- Evaluate BWMS options
- Identify BWMS suitable for vessel design and operation
- Contact BWMS vendors – request
 - Information on BWMS models
 - Status of USCG type approval testing
- Plan BWMS retrofit
 - Design
 - Determine installation options

Note: ABS Technical Evaluation Services for BWMS assist with this process. Refer to our brochure “Technical Evaluation Services for Ballast Water Management Systems”

California: Amended Requirements

- California Assembly Bill 1312 amending the Marine Invasive Species Act
- Interim ballast water performance standards – implementation delayed:
 - Newly built vessels (constructed on or after 1 January 2020) – first arrival in a CA port
 - Existing vessels – First drydocking on or after 1 January 2020
- Final ballast water performance standards – implementation delayed until 1 January 2030
- Changed deadline for submitting Ballast Water Reporting Form from upon departure from each port of call to 24 hours in advance of arrival.
- CA authorized to take samples of ballast water, sediment, and biofouling from at least 25% of arriving vessels



California Ballast Water Treatment Performance Standards

- Interim

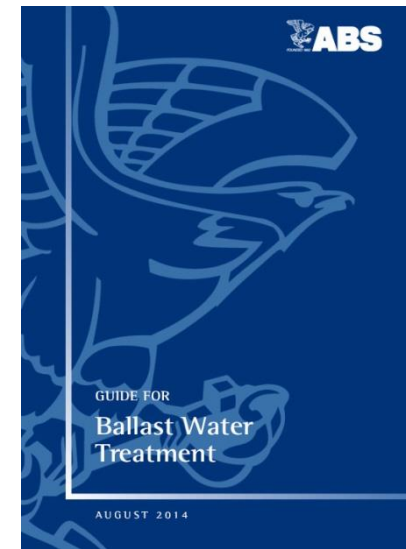
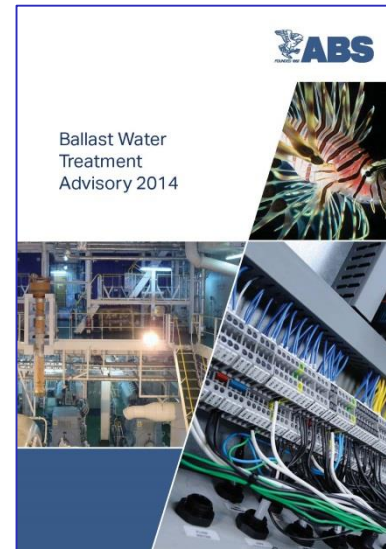
Organism Size Class	Performance Standard
Larger than 50 μm (micrometer or one millionth of a meter) in minimum dimension	No detectable living organisms
10 – 50 μm in minimum dimension	Less than (<) 0.01 living organisms per ml (milliliter)
Less than 10 μm in minimum dimension	Less than 10^3 (1,000) bacteria per 100 ml Less than 10^4 living viruses per 100 ml
Escherichia coli	Less than 126 cfu (colony forming units) per 100 ml
Intestinal enterococci	Less than 33 cfu per 100 ml
Toxicogenic Vibrio cholera (human cholera)	Less than 1 cfu per 100 ml OR Less than 1 cfu per gram of wet weight biological material

- Final – Effective 1 January 2030

- Zero detectable living organisms for all organism size classes

Recent ABS Environmental Publications

- 2014 ABS Ballast Water Treatment Advisory
- 2014 ABS Guide for Ballast Water Treatment (including BWMP template)
- ABS Trends on:
 - Nitrogen Oxides (Nox) Emission Compliance Inside Emission Control Areas (ECAs) (December 2015)
 - Preparing for Compliance with USCG Ballast Water Discharge Standards (December 2015)
 - Sulfur Oxide (SOx) Limits Reduced in ECAs (January 2015)
 - 2013 VGP Sampling and Analysis Requirements (June 2014)
 - 2013 Requirements for EALs (May 2014)
 - New Requirement for the Upcoming 2013 VGP (October 2013)
 - US Ballast Water Management Requirements (May 2013)



Request Assistance from ABS

- Understand the requirements and deadlines
- Check ship schedules for drydocking and surveys
- Review ship ballasting operations
- Develop options for compliance

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