

BALLAST WATER PROGRAMS:

Comparison of Key Features: International Maritime Organization Convention; and Current and Proposed U.S. Domestic Policy

	IMOⁱ	USCG	S770ⁱⁱ	S363ⁱⁱⁱ	HR 5030^{iv}
Enabling legislation	International Convention adopted 12/04	NISA 1990, 1996	Amends NISA 1990, 1996	Amends NISA 1990, 1996 to create Ballast Water Management Act	Amends NISA 1990, 1996
Effective date of legislation	12 months after ratification by 30 states representing 35% of shipping tonnage	July 2004	In Senate Environment and Public Works Committee	In Senate Commerce, Science and Transportation Committee	In House Transportation and Infrastructure Committee
Phased implementation	2009-2012 based on capacity & construction date	July 2004	Final treatment standards in 2011	2009-2016 based on capacity & construction date	2009-2016 based on capacity & construction date
General application	All vessels	All vessels entering US waters from outside the EEZ	Vessels entering US waters from EEZ	Vessels entering US waters from EEZ	All vessels
Special rules for small recreational vessels	No	No	No	No	Yes
Special requirements for NOBOBs – saltwater flushing ^v	No	No	No	No	Yes
Designate enclosed aquatic systems ^{vi}	No	No	No	No	Yes
No exchange or discharge of unexchanged ballast in Marine Sanctuaries or prohibited areas	No	No	No	No	Yes
Preempts state or provincial programs	No	No	No	Yes	Yes (although not specifically stated)
Requires consistency with IMO and USCG	NA	NA	Yes	Yes	No
Provides for safety exemptions	Yes	Yes	Yes	Yes	Yes
Requires that operators use best management practices ^{vii}	Yes	Yes ^{viii}	Yes	Yes	Yes
Requires operators to develop and use vessel specific ballast	Yes	Yes	No	Yes	Yes

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management plans ^{ix}					
Requires that operators maintain logs and report ballast operations ^x	Yes	Yes – all vessels entering US ports.	No	No	Yes
Requires owner/operators to submit interim report that describes steps that they will take to meet treatment or exchange standards	No	No	No	No	No
Requires assessment of non-ballast water vectors and management recommendations					Yes ^{xi}
Jurisdiction's approach to managing ballast water	Exchange or treat, moving toward treatment only	Exchange, retain on board or use approved treatments alternatives. Treatment standards in consideration	Exchange or treat, moving to treatment only after 2011	Treat or exchange, moving toward treatment only	Exchange, retain on board or treat, moving toward treatment only
Exchange standard	Flow-thru = 3 times tank volume. Empty/refill = 95% vol. exchange.	Flow-through = 3 times tank volume. 100% empty/refill	Flow-through = 95% vol. exchange. 100% empty/refill	At least 95% volumetric exchange for each tank.	95% vol. Exchange efficiency.
Exchange location	≥200 miles offshore in water ≥ 200 m.	≥200 miles offshore	200 miles offshore in water ≥ 200 m.	200 miles offshore in water ≥ 200 m.	Transoceanic voyages: ≥200 miles offshore in water ≥ 200 m. For domestic voyages: No less than 50 nautical offshore. The secretary may set alternative exchanges zone to protect resources.
Treatment standard	Discharge standards: ≤10 org/m ³ greater than 50 microns; ≤10 org/ ml between 10 to 50	Three alternatives under consideration.	Numerical standards to ensure no measurable risk, or when none available use of best performing treatment ^{xiii} .	Discharge standard: ≤ 0.1 org/m ³ greater than 50 microns; ≤ 0.1 org/m ³ less than 50	Discharge standards ^{xv} : ≤10 org/m ³ greater than 50 microns; ≤1 org/ 10 ml between 10 to 50

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	microns, Plus human health standards. ^{xii}			microns, Plus human health standards ^{xiv}	microns, Plus human health standards. ^{xvi}
Requires jurisdiction to approve treatment systems	No – except for biocide/chemical treatment	Proposed	Yes	Yes	Sets up a federal process to approve technologies. Approved alternative systems that meet IMO standards are in compliance for 10 years.
Allows use of approved experimental treatment systems	Yes	Yes	Yes	Yes	Yes
Requires early compliance for new ships	Yes	Yes ^{xvii}	Proposed plus incentives to install technology	Yes	No
Requires operators to manage ballast tank sediments ^{xviii}	Yes	Proposed	Proposed	Yes	Yes
Requires facilities that clean or repair ballast tanks to provide sediment disposal options	Yes	No	Unknown	EPA to set standards for these facilities	Yes
Requires jurisdictions to designate no-ballast uptake areas	Yes ^{xix}	Yes	Unknown	Proposed	
Requires jurisdictions compensate operators for delays	Yes	No	No	No	No- the Secretary can waive ballast requirements for substantial business hardships.
Allows jurisdictions to inspect logs and sample ballast water	Yes	Yes	No	Proposed	No – the secretary shall review potential alternative ballast water discharge areas and adopt regulations to designate these
Penalties for non-compliance	Members develop	Civil penalties up to \$27,500/day plus criminal penalties	Proposed – civil penalties not to exceed \$50,000 plus criminal penalties	Proposed – civil and criminal penalties	None identified
Allows jurisdictions to assess fees to support program	No	No	No	No	No

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- i Adopted by consensus in February 2004
 - ii Introduced by Senator Carl Levins (D) Michigan as S770 – referred to Committee on Environment and Public Works
 - iii Introduced by Senators Daniel Inouye (D) Hawaii and Ted Stevens (R) Alaska – referred to Committee on Science, Commerce and Transportation 2005
 - ^{iv} Introduced March 2006 by Rep Miller, MI and referred to House Transportation and Infrastructure Committee
 - v Vessel operators, if they cannot exchange before enter from EEZ, must flush empty ballast tanks before entering 200 miles
 - vi The secretary in consultation with the Administrator, ANS TF and representative from affected states shall designate enclosed aquatic ecosystems, including the Great Lakes.
 - vii Avoid uptake or discharge in certain areas, clean ballast tanks, clear anchors and chains, clean hull fouling organisms, etc
 - viii Required for **all** vessels operating in US waters.
 - ix Plans detail actions to implement BW requirements, how sediment must be managed, designates an office in charge and defines reporting requirements
 - x Ballast record book can be electronic, integrated into other record systems, etc. It must be available for inspection anytime. Logs detail ballast practices undertaken.
 - xi Requires US Coast Guard to submit a report to congress on non-ballast water vectors 180 days after enactment
 - xii Discharge less than 250 colony-forming units (cfu) per 100 ml of *E. coli*; and 5. Less than 100 cfu per 100 ml of intestinal enterococci
 - xiii Best performing technology used when no technology exists for a vessel to discharge treated ballast that meets standards. In such cases vessels discharge ballast water that has a concentration of viable biological material that contains 99% (for existing vessels) or 99.9% (for new vessels) fewer near-coastal plankton than taken on at intake area.
 - xiv Less than 1 colony forming units (cfu) of vibrio cholera/100 ml, 126 cfu of *E coli*/100ml, 33 cfu enterococci/100 ml
 - xv The secretary may apply higher standards and earlier implementation if technology is available to treat to a higher standard or can be implemented earlier.
 - xvi Discharge less than 126 colony-forming units (cfu) per 100 ml of *E. coli*; and less than 33 cfu per 100 ml of intestinal enterococci and less than 1 living organisms per 100 ml of cholera.
 - xvii Shipboard Technology Evaluation Program (STEP) January 2004. Approved systems must be environmentally safe and as effective as exchange.
 - xviii Remove and dispose of sediments according to the ship's ballast water management plan
 - xix Identify and notify mariners of areas where ballast water should not be taken onboard, including areas with outbreaks and infestations; near sewage outfalls; with poor tidal flushing