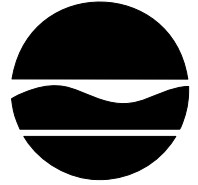


**New York State Department of Environmental Conservation
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Alexander B. Grannis
Commissioner

Mr. Walter E. Mugdan
Director
Division of Environmental Planning and Protection
United States Environmental Protection Agency
290 Broadway
New York, New York 10007-1866

Re: Clean Water Act Section 401 Certification for
Commercial Vessel and Large Recreational Vessel General Permit

Dear Mr. Mugdan:

DRAFT

This certification is issued by the Department of Environmental Conservation (Department or DEC) under Section 401(1) of the Federal Clean Water Act (CWA) in response to your letter of July 9, 2008 to Mr. James G. DeZolt, P.E., Director, Division of Water, and is based on the information and materials included in Docket ID No. EPA-HQ-OW-2008-0055, available at <http://www.regulations.gov>.

DEC certifies that discharges from vessels covered by the United States Environmental Protection Agency (EPA) General Permit for discharges incidental to the normal operation of commercial vessels and large recreational vessels (VGP) will not contravene New York's effluent limitations or standards as provided for under CWA Sections 301, 302, 303, 306, 307, and 401, provided the following conditions set forth in the Certification are met.

This certification shall expire five years after the date of issuance of the EPA's VGP.

Certification Conditions for the VGP

Section 17-0301 of the New York State Environmental Conservation Law (ECL) requires the Department to develop water quality standards for the waters of New York State. Section 17-0809 of the ECL requires the Department to develop effluent limits for discharges from point sources to the waters of New York State. Section 17-0501 of the ECL requires that no discharge to the waters of New York State may violate water quality standards. The discharge limitations, and other conditions set forth in this certification are required to comply with New York's regulations, set forth at 6 NYCRR § 703.2, which state no toxic or other deleterious substances may be discharged that impair the waters for their best usages. The CWA defines "pollutant" to

include “biological material” such as invasive species. In this case, the best use of New York’s waters are for fish, shellfish, and wildlife propagation and survival. Conditions #1-6 of this Certification are needed to comply with the more stringent New York State statutes and regulations set forth in this paragraph. In accordance with 40 CFR 124.53 (e)(3) these conditions cannot be made less stringent and still comply with State water quality standards.

1. The operator of any vessel covered under the VGP whose voyage originates from within the exclusive economic zone and enters New York waters with ballast on board, shall conduct ballast water exchange at least 50 nautical miles from shore and in water at least 200 meters in depth. Such vessels that carry only residual amounts of ballast water and/or sediments shall conduct saltwater flushing of their ballast water tanks, at least 50 nautical miles from shore and in water at least 200 meters in depth.

Ballast water exchange is defined as at least 1 empty and refill cycle of each ballast tank that contains ballast water, resulting in a salinity level of at least 30 parts per thousand (ppt). If the master of a vessel determines that such exchange is impracticable, a sufficient number of flow-through exchanges of ballast water may be conducted to achieve replacement of least 95 percent of ballast water in ballast tanks of the vessel, resulting in a salinity level of at least 30 ppt.

Saltwater flushing is defined as the addition of ocean water to ballast water tanks, the mixing of the flushwater with residual water and sediment through the motion of the vessel, and the discharge of the mixed water, such that the resulting residual water has a salinity level of at least 30 ppt.

All vessels entering New York waters must maintain the ability to measure salinity levels in each tank onboard the vessel so that salinities of at least 30 ppt can be ensured.

This condition does not apply to vessels that operate exclusively in the Great Lakes.

This condition does not apply to vessels operating exclusively within waters consisting of New York Harbor, Long Island Sound, the Hudson River south of George Washington Bridge, the East River south of Macombs Dam Bridge, Upper and Lower New York Bays, Raritan Bay, Jamaica Bay, Sandy Hook Bay, and connecting channels south of George Washington Bridge and south of Macombs Dam Bridge.

This condition does not apply to a vessel that carries permanent ballast water, all of which is in sealed tanks that are not subject to discharge.

This condition does not apply to vessels of the Armed Forces.

This condition does not apply to any vessel of the National Defense Reserve Fleet that is scheduled to be disposed of through scrapping or sinking.

This condition does not apply to the discharge of ballast water if the master of the vessel determines that compliance with this condition would threaten the safety or stability of the vessel, its crew, or its passengers because of adverse weather, equipment failure, or any

other relevant condition. If a vessel is unable to conduct ballast water exchange, or flushing, as specified, due to serious safety concerns as specified above, the operator of any vessel with ballast on board shall take reasonable measures to avoid discharge of organisms in ballast water and shall inform the Department in writing of the measures taken.

2. By not later than January 1, 2012, each vessel covered under the VGP that operates in New York waters, shall have a ballast water treatment system that meets the following standards, subject to the exceptions listed below.

(A) *Standard for organisms 50 or more micrometers in minimum dimension:* Any ballast water discharged shall contain less than 1 living organism per 10 cubic meters.

(B) *Standard for organisms less than 50 micrometers in minimum dimension and more than 10 micrometers in minimum dimension:* Any ballast water discharged shall contain less than 1 living organism per 10 milliliters.

(C) *Standards for indicator microbes:*

- (i) Any ballast water discharged shall contain less than 1 colony-forming unit of toxicogenic *Vibrio cholera* (serotypes O1 and O139) per 100 milliliters or less than 1 colony-forming unit of that microbe per gram of wet weight of zoological samples;
- (ii) Any ballast water discharged shall contain less than 126 colony-forming units of *escherichia coli* per 100 milliliters; and
- (iii) Any ballast water discharged shall contain less than 33 colony-forming units of intestinal enterococci per 100 milliliters.

This condition does not apply to a vessel that carries permanent ballast water, all of which is in sealed tanks that are not subject to discharge.

This condition does not apply to vessels of the Armed Forces.

This condition does not apply to any vessel of the National Defense Reserve Fleet that is scheduled to be disposed of through scrapping or sinking.

3. Each vessel constructed on or after January 1, 2013 that is covered under the VGP and operates in New York waters, shall have a ballast water treatment system that meets the following standards, subject to the exceptions listed below.

(A) *Standard for organisms greater than 50 micrometers in minimum dimension:* Any ballast water discharged shall contain no detectable living organisms.

(B) *Standard for organisms less than 50 micrometers in minimum dimension and more than 10 micrometers in minimum dimension:* Any ballast water discharged shall contain less than 0.01 living organism per milliliter.

(C) *Standards for indicator microbes:*

- (i) Any ballast water discharged shall contain less than 1 colony-forming unit of toxicogenic *Vibrio cholera* (serotypes O1 and O139) per 100 milliliters or less than 1 colony-forming unit of that microbe per gram of wet weight of zoological samples;
- (ii) Any ballast water discharged shall contain less than 126 colony-forming units of *escherichia coli* per 100 milliliters; and
- (iii) Any ballast water discharged shall contain less than 33 colony-forming units of intestinal enterococci per 100 milliliters.

(D) *Standard for bacteria:* Any ballast water discharged shall contain less than 1,000 bacteria per 100 milliliters.

(E) *Standard for viruses:* Any ballast water discharged shall contain less than 10,000 viruses per 100 milliliters.

(F) For purposes of this condition, “Constructed” means a stage of vessel construction where:

- (i) the keel is laid; or
- (ii) construction identifiable with a specific vessel begins; or
- (iii) assembly of the vessel has commenced comprising at least 50 tonnes or 1 percent of the estimated mass of all structural material, whichever is less; or
- (iv) the vessel undergoes a major conversion.

(G) In the context of this condition, “Major Conversion” means a conversion of a vessel;

- (i) which changes its ballast water carrying capacity by 15 percent or greater; or
- (ii) which changes the vessel type; or
- (iii) which, in the opinion of the Department, is projected to prolong its life by ten years or more; or
- (iv) which results in modifications to its ballast water system other than component replacement-in-kind.

This condition does not apply to a vessel that carries permanent ballast water, all of which is in sealed tanks that are not subject to discharge.

This condition does not apply to vessels of the Armed Forces.

This condition does not apply to any vessel of the National Defense Reserve Fleet that is scheduled to be disposed of through scrapping or sinking.

No extensions will be made to this implementation date, unless an entity covered under the permit makes a request for an extension to the Department based on compelling evidence that the specified date cannot be met. Such requests must be made no later than June 30, 2011.

4. Any vessel covered under the VGP that operates in New York waters may not discharge treated or untreated graywater into Waters of New York State within 3 nautical miles of shoreline, or within Long Island Sound, New York Harbor or the Hudson River Estuary. This limit is in effect regardless of a vessel’s traveling speed.

5. Any vessel covered under the VGP that operates in New York waters may not discharge bilge water into New York Waters.

This condition does not apply to the discharge of bilge water if the master of the vessel determines that compliance with this condition would threaten the safety or stability of the vessel, its crew, or its passengers because of adverse weather, equipment failure, or any other relevant condition.

6. Pursuant to the Clean Water Act, the inclusion of a state water quality certification requirement in the draft VGP appropriately preserves the lawful authority of the individual States to implement more protective ballast water pollution controls as part of the EPA general permit within their respective waters. Pursuant to the Clean Water Act, the States also have the authority to adopt more stringent ballast water requirements than currently proposed under the draft VGP.

As part of New York's certification of the draft VGP, DEC finds that the additional discharge standards set forth as conditions in this certification letter are necessary to reduce the unintentional discharge of invasive species and disease organisms that have the potential to disrupt the ecological balance of New York's waters and negatively impact the fish and wildlife resources of the State, as well as other states.

The additional discharge standards set forth as conditions in this certification letter are necessary for the following reasons. First, there is overwhelming evidence that water quality, including fish, shellfish, and wildlife propagation and survival, has been impaired in recent decades in New York's waters, especially New York's Great Lakes waters, by invasive species. Second, there is overwhelming evidence that direct discharge of invasive species into New York waters is not a necessary condition for impairment by invasive species; discharges into adjacent, connected waters have severely impaired New York waters for their best usage such as fish, shellfish, and wildlife propagation and survival. Third, the above points provide a reasonable basis for inferring that water quality will be further impaired by additional, future introductions of invasive species and that impairments to New York's water quality will be caused by discharges of such species to adjacent, connected waters.

The ability of various invasive species to spread into adjacent, connected waters is well known. The zebra mussel is a prime example. This mussel, introduced in or near Lake St. Clair where it was discovered in 1988,¹ quickly spread into New York waters and throughout the Great Lakes and beyond. The rapid spread of the zebra mussel during the past twenty years can be seen, for example, on a series of maps available on the website of Sea Grant's National Aquatic Nuisance Species Clearinghouse.² As another example, the round goby was introduced into the St. Clair River in 1990, "probably via contaminated

¹ NOAA, National Center for Research on Aquatic Invasive Species, Great Lakes Aquatic Nonindigenous Species List (www.glerl.noaa.gov/res/Programs/ncrais/great_lakes_list.html).

² New York Sea Grant, National Aquatic Nuisance Species Clearinghouse (www.aquaticinvaders.org).

ballast water of transoceanic ships.”³ Following this discharge in adjacent, connected waters, the round goby has moved into New York waters and contributed to the impairment of these waters for their best usage such as fish, shellfish, and wildlife propagation and survival.⁴ Round gobies “have shown a rapid range of expansion through the Great Lakes”⁵ and have been found in the upper St. Lawrence River and the lower Genesee River, among other New York waters.⁶ Yet another example is the spiny water flea, “first found in Lake Huron in 1984 – probably imported in the ballast water of a trans-oceanic freighter. Since then, populations have exploded and the animal can now be found throughout the Great Lakes and in some inland lakes,”⁷ including New York waters.

As recognized by EPA,⁸ the predominant pathway for aquatic invasive species entry into the Great Lakes is the ballast water of oceangoing ships.⁹ Invasive species introduced into the Great Lakes from vessels’ untreated ballast water discharges have created serious, damaging impacts that threaten the resource’s ecological and economic health.¹⁰ Because the Great Lakes contain fresh water, some of the most damaging ballast water-induced species are native to other fresh or brackish waters, particularly those in the Ponto-Caspian region (the Black, Caspian and Azov Seas).¹¹ These Ponto-Caspian invaders are now abundant in European waters used extensively by ships destined for the Great Lakes, and their continued invasion into the Lakes is considered highly probable.¹²

³ Great Lakes Information Network, “Goby in the Great Lakes Region” (www.great-lakes.net/envt/flora-fauna/invasive/goby.html).

⁴ U.S. Geological Survey, Nonindigenous Aquatic Species (NAS) Program, Species Fact Sheet, “Apollonia (Neogobius) melanostomus (Pallas 1814); Common Name: round goby,” (<http://nas.er.usgs.gov/queries/FactSheet.asp?speciesID=713>); M. Walsh et al., Occurrence and Food Habits of the Round Goby in the Profundal Zone of Southwestern Lake Ontario, 33 *J. of Great Lakes Research* 83 (2007).

⁵ U.S. Geological Survey, Species Fact Sheet, op. cit.

⁶ U.S. Geological Survey, Nonindigenous Aquatic Species (NAS) Program (<http://nas.er.usgs.gov/AlertSystem/default.asp>), NAS Alert System results for New York.

⁷ Great Lakes Information Network, “Spiny Water Flea in the Great Lakes Region” (www.great-lakes.net/envt/flora-fauna/invasive/spinyflea.html).

⁸ EPA, Aquatic Nuisance Species in Ballast Water Discharges: Issues and Options, 4, 6 (September 10, 2001), identified at 66 Fed. Reg. 49381 (September 27, 2001).

⁹ E. Mills, et al., Exotic Species in the Great Lakes: A History of Biotic Crises and Anthropogenic Introductions, 19 *J. of Great Lakes Research* 1 (1993).

¹⁰ 16 U.S.C. §4701(a)

¹¹ A. Ricciardi and H. MacIsaac, Recent Mass Invasion of the North American Great Lakes by Ponto-Caspian Species, 15 *Trends in Ecology and Evolution* 62 (2000).

¹² Id.

Such invasive species have competed with, preyed upon and otherwise altered the Great Lakes' environment, resulting in population declines and compromised species viability of the region's native plants, fish and wildlife.¹³ They have harmed the region's commercial and recreational fishing industries and damaged its public water and energy generating infrastructure.¹⁴ The insidious effects of these species have been costly to deal with and show no signs of dissipating. The harm caused by exotic nuisance species such as the zebra mussel, round goby, and spiny water flea in the Great Lakes is widespread. For example, large zebra mussel populations reduce food and oxygen for native fauna, and have been observed completely covering native mussels and snails, threatening their survival.¹⁵ The zebra mussel readily attaches to submerged hard surfaces including rocky shoals, water intake pipes and docks, forming dense layered colonies that have approached one million mussels per square meter.¹⁶ Power companies and others must repeatedly remove mats of these mussels from their infrastructure. In addition, selective feeding by zebra mussels has been implicated in recurring nuisance algae blooms in the Great Lakes, causing taste and odor problems and increased treatment costs for municipal water supplies.¹⁷ Congress estimates that the economic disruption to communities, just from the zebra mussel, has already cost billions of dollars.¹⁸ The round goby, an invader from the Black and Caspian Seas, feeds on mollusks, crustaceans, and lake trout eggs and fry, injuring Great Lakes native species through competition for food and predation.¹⁹ Another exotic invader from the Black and Caspian Seas, the spiny water flea, rarely more than a centimeter in length, competes with newly hatched Great Lakes native fish populations by feeding on zooplankton. The sharp spines characteristic of the spiny water flea prevent most small fish from swallowing it, thereby allowing this invader to reach a disproportionate population abundance.²⁰

¹³ 16 U.S.C. §4701(a).

¹⁴ *Id.*

¹⁵ U.S. Dept. of the Interior, National Biological Survey, A. Benson, et al., "Invasion of the Zebra Mussel into the United States," *Our Living Resources: A Report to the Nation on the Distribution, Abundance, and Health of U.S. Plants, Animals and Ecosystems*, 445-46 (1995).

¹⁶ *Id.*; D. Pimentel, et al., *Environmental and Economic Costs of Non-Indigenous Species in the United States*, 50 *Bioscience* 53, 58 (2000).

¹⁷ National Oceanic and Atmospheric Administration, Great Lakes Environmental Research Laboratory, *Aquatic Invasive Species (AIS) and the Great Lakes: Simple Questions, Complex Answers*, (September 2002).

¹⁸ 16 U.S.C. §4701(a)(4).

¹⁹ Cambridge Scientific Abstracts, *Environmental Policy Issues, Harmful Non-Native Species: Issues for Congress VII*, (April 8, 1999) (available at www.csa.com/hottopics/ern/99nov/biodv-26f.html); Michigan Dept. of Natural Resources, *Annual Report, State of the Great Lakes*, 32 (1993).

²⁰ Corn et al., *op. cit.*; Michigan Dept. of Natural Resources, *op. cit.*

Since 2000, significant mortality of lake sturgeon, Common Loon, Red-breasted Merganser, and other fish and waterbirds have been documented on Lake Erie. More recently, since 2002, similar mortality events have been noted, with increasing regularity, distribution and magnitude on Lake Ontario. Over the last three years Caspian Tern, and several other waterbird species, have been impacted. Nonnative invasive species, the quagga mussel and round goby, appear to be the biological transport mechanism bringing deadly Type E botulism toxin from the benthic environment to within foraging range of nesting and migrating waterbirds.²¹

Less stringent conditions than those set forth in this certification letter are not sufficient to prevent the impairment of New York's waters for their best usage such as fish, shellfish, and wildlife propagation and survival for the following reasons. As stated in a recent California report on ballast water standards, "Reports submitted as part of the IMO Convention suggest that the standards adopted by IMO would only be a marginal improvement on current management practices of ballast water exchange for the largest organisms (>50 µm) and may be similar to unmanaged ballast water for the smaller organisms (<50 µm) (Table V-1, MEPC 49/2/12003) (Section VII 'Scientific Considerations')." ²² These IMO standards – considered to be no more than a marginal improvement over the practice of ballast water exchange – are not included in this certification. The IMO standards are concentration-based, which is beneficial, yet they are not sufficiently protective. More stringent concentration-based standards are needed to protect New York's waters and are specified as conditions in this certification.

In general, concentration-based numerical discharge standards are needed as a replacement for ballast water exchange because the results of ballast water exchange are so highly variable²³ and therefore unprotective as an ongoing permit condition. As stated in the California report, "Concentration based standards...would specify a specific concentration of organisms that could be discharged following treatment, regardless of source port concentrations.... Concentration based standards allow for the consideration of both a protection level to reduce risk, as well as technical consistency, such as detection limits."²⁴ Both New York and California routinely use concentration-based standards for protection of water and air quality.

²¹ K. Roblee, W. Stone and D. Adams, "Waterbird Mortality as a Result of Type E Botulism in Lake Erie and Lake Ontario," Northeast Natural History Conference IX, New York State Museum, Albany, NY (2006).

²² M. Falkner et al., "California State Lands Commission Report on Performance Standards for Ballast Water Discharges in California Waters," California State Lands Commission, Marine Facilities Division, January 2006, at 34.

²³ *Id.*, esp. Fig. VII-1 at 18.

²⁴ *Id.* at 16.

The State of California recently promulgated relatively stringent concentration-based standards²⁵ that “encompass several...desirable characteristics: they are significantly better than ballast water exchange, they are in-line with the best professional judgment from the scientific experts participating in the IMO Convention, and they do approach a protective zero discharge standard.”²⁶ These standards are based primarily on recommendations made by U.S. government representatives participating in the IMO Convention²⁷ and were subsequently recommended by the California Performance Standards Advisory Panel in its Majority Report.²⁸ The standards, considered to be approximately a 1000-fold improvement over ballast water exchange,²⁹ provide a reasonable basis for protection of New York waters and are adopted as a condition (Condition #3) for new ships constructed after January 1, 2013 that operate in New York waters. New York finds that the standards set forth in Condition #3 are needed to prevent impairment of waters for their best usage and are thus needed to comply with the New York State statutes and regulations set forth above. In accordance with 40 CFR 124.53 (e)(3), this condition cannot be made less stringent and still comply with State water quality standards.

New York has set a reasonable compliance schedule for ships operating in New York waters and has allowed an additional year or more beyond the California implementation schedule. This additional time is intended to alleviate possible congestion problems for shipyards or possible supply problems for equipment vendors that might occur if simultaneous compliance were required in New York and California.

Other standards, considered to be approximately a 100-fold improvement over ballast water exchange, are adopted as a condition that must be met by all ships covered by the VGP that operate in New York waters after January 1, 2012. These standards are based primarily on recommendations made by the International Study Group on Ballast Water and Other Ship Vectors.³⁰ The standards, which provide a reasonable basis for protection of New York waters and are implemented on a reasonable compliance schedule, are adopted Condition #2 in this certification. New York finds that the standards set forth in Condition #2 are needed to prevent impairment of waters for their best usage and are thus needed to comply with the New York State statutes and regulations set forth above. In accordance with 40 CFR 124.53 (e)(3), this condition cannot be made less stringent and still comply with State water quality standards.

²⁵ California Title 2, Division 3, Chapter 1, Article 4.7, Performance Standards for the Discharge of Ballast Water For Vessels Operating in California Waters (2007).

²⁶ M. Falkner et al., op. cit., at 36-37.

²⁷ Id. at 19; Submission by the United States to IMO on Ballast Water Discharge Standards, Regulation D-2, document BWM/CONF/14 (2004).

²⁸ M. Falkner et al., op. cit., at 32; Report and Recommendations of the California Advisory Panel on Ballast Water Performance Standards, October 2005.

²⁹ M. Falkner et al., op. cit., at 19.

³⁰ Id.

It should be noted that this certification is only effective for the next five years. Since some period of time is required to allow vessels to install the technology needed to meet the conditions of this certification, the Department has sought to provide reasonable notice and time allowance. It is the Department's intention to apply the relatively stringent standards set forth in Condition #3 to all ships operating in New York waters in the next water quality certification to be filed after the expiration of this one.

Ballast water exchange or flushing, as already required by the VGP for many vessels, is widely recognized as a beneficial but imperfect way to reduce invasive species introductions in ballast water discharges. Condition #1 extends the requirement of exchange or flushing to certain other vessels that enter New York waters on coastal voyages, thereby reducing the likelihood of invasions from other coastal waters such as Chesapeake Bay. New York finds that the standards set forth in Condition #1 are needed to prevent impairment of waters for their best usage and are thus needed to comply with the New York State statutes and regulations set forth above. In accordance with 40 CFR 124.53 (e)(3), this condition cannot be made less stringent and still comply with State water quality standards.

Conditions #4 and #5 restrict discharges of bilgewater and graywater in order to protect New York's coastal waters from contaminants, nutrients, and bacterial and viral agents. New York finds that the standards set forth in Conditions #4 and #5 are needed to prevent impairment of waters for their best usage and are thus needed to comply with the New York State statutes and regulations set forth above. In accordance with 40 CFR 124.53 (e)(3), this condition cannot be made less stringent and still comply with State water quality standards. It should be noted that the discharge of sewage is not covered by either this certification or the VGP because sewage discharge is governed by the Marine Sanitation Devices requirements of the Clean Water Act, 33 U.S.C. 1322(a)(6).

7. The contact point for consultation, submittals, and approvals as referred to in this Certification is:

Francis G. Zagorski
NYS DEC
Division of Water, 4th Floor
625 Broadway
Albany, New York 12233-3505

The DEC reserves the right to challenge the EPA's VGP.

Should you require further information regarding this Certification, please contact Mr. Francis G. Zagorski at 518-402-8168.

Sincerely,

William R. Adriance

Chief Permit Administrator
NYS DEC
Division of Environmental Permits, 4th Floor
625 Broadway
Albany, New York 12233-1750

DRAFT