

# *Technical Guidance for the Public Vessel Operator*

*Provided by Marine Services Bureau,*

*New York State Office of Parks, Recreation  
and Historic Preservation*



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# OPERATIONS

## REGISTRATION AND CERTIFICATION

### Definition of A Public Vessel

*As stated by the New York State Navigation Law, the term "Public Vessel" shall mean and include every vessel which is propelled in whole or in part by mechanical power and is used or operated for commercial purposes on the navigable waters of the state; that is either carrying passengers, carrying freight, towing, or for any other use for which compensation is received, either directly or where provided as an accommodation, advantage, facility, or privilege at any place of public accommodation, resort, or amusement. (Section 2.6(a), NYS Navigation Law)*

### **Registration**

*New York State law requires that every mechanically propelled vessel operated primarily on the navigable waters of the state or any waters within the boundaries of the state be registered with the Department of Motor Vehicles in accordance with article 48 of the Vehicle and Traffic Law. A mechanically propelled vessel is one equipped with a motor (gasoline, diesel, electric, etc) regardless of whether or not the motor is the primary means of propulsion (i.e. an auxiliary sailboat or a canoe with a trolling motor). Upon registration of the vessel, the owner will receive a registration certificate, indicating the vessel's assigned number, and a set of validating stickers. Vessel registration must be renewed every three years. The requirement for a vessel to be registered is separate and distinct from the requirements of Public Vessel certification but failure to prove that the vessel is properly registered may result in the vessel not receiving certification. It is required that the registration certificate be on board the vessel at all times when it is in operation.*

### **Registration Number**

*The registration number consists of the letters NY followed by no more than four numbers and then two capital letters. A two-inch space or hyphen must separate the letter and number groups (NY 1234 AA or NY-1234-AA). The number should be painted on or permanently affixed to each side of the forward half of the vessel. It should read from left to right, be in block letters not less than three inches high, and be of a color that contrasts with the color of the hull. It should be clearly visible and readable from a distance of 100 feet during daylight hours. Except for the PV lettering described in the following section, no other letters or numbers may be displayed on the forward half of the vessel. Once assigned to the vessel, the registration number will remain with it until the vessel is destroyed or permanently removed from the state.*

### **Public Vessel Identification**

*When a vessel is approved and certified as a Public Vessel, the letters PV must be displayed above or below the registration number on both sides of the forward half of the vessel. These letters are to be not less than five inches in height and maintained in a legible condition so that they are readily discernible during daylight hours at a distance of 200 feet.*

### Inspection of Public Vessels

#### **Requesting Inspection**

*Any owner who intends to operate a Public Vessel must contact the Marine Services Unit to request inspection of the vessel which is required prior to its operation as a PV. For vessels entering service as a PV for the first time, the Marine Services Unit should be contacted as early in the season as possible to schedule an inspection. During peak inspection season - May, June & July - scheduling will be difficult and operations may be unnecessarily delayed. For vessels already in service as a PV, the Marine Services will try to schedule your*

*inspection as close to the date it was inspected the prior year as possible. If there are any known scheduling concerns, the owner of the vessel or his/her representative should contact the Marine Services Unit as early as possible to avoid scheduling conflicts. Failure to have your boat available for inspection at an agreed upon date may result in your having to transport your boat for later inspection.*

### **Inspection Criteria and Certification**

*A Public Vessel must be inspected before it is placed in service and annually thereafter. The inspection includes a complete examination of the hull, propulsion system, control systems, fuel system, ventilation, electrical system, and all required safety equipment. If the vessel is found to be in compliance with all inspection criteria, the inspector will certify the vessel as a Public Vessel. The inspector will also make a determination on the number of passengers the vessel may carry and the manning requirements. All information will be recorded on the vessel inspection report. The top copy of the report, when signed by the inspector and the vessel owner, will serve as a temporary Certificate of Inspection valid for thirty days. A formal Certificate will normally be received within two to three weeks and both the temporary inspection report and formal Certificate of Inspection shall be carried on the PV until the subsequent year's inspection. A copy of the inspection report appears in the appendices.*

### **Damage, Repairs or Modifications**

*Whenever any public vessel is placed upon the dock for repairs or after any modifications are made to the dimensions, weight or capacity to a public vessel, it shall be the duty of the owner to report the fact to the inspector so that he or she may make a thorough inspection to determine if such vessel is seaworthy; if in the judgment of the inspector the type of repair or modification renders such examination necessary. Before making general repairs to an engine of a vessel coming under the provisions of this chapter, the engineer in charge of such engine shall report, in writing, the nature of such repairs to the inspector. It shall be the duty of all engineers when an accident occurs to an engine in their charge tending to render such engine unsafe, to report the same to the inspector promptly. Operation of a public vessel after such repairs or modifications without notifying the Marine Inspectors and submitting to an inspection if required is a misdemeanor.*

### **Deficiencies and Failures**

*Any deficiencies discovered during the vessel inspection will be listed on the inspection report. The quantity and seriousness of the deficiencies will be the determining factor in whether or not the vessel passes inspection. Identical deficiencies in consecutive years will be immediate cause for failure. All listed deficiencies must be corrected prior to placing the vessel in service. If the vessel does not pass inspection, a temporary permit will not be granted. The owner of the vessel will receive a copy of the inspection report noting all deficiencies and the inspector's instructions for correcting them. When all deficiencies have been corrected, the owner is required to mail a signed, notarized letter to the Marine Services Unit certifying that corrective action has been taken. The inspector may then either schedule a second inspection of the vessel or issue a Certificate of Inspection.*

### **Posting of Certificate of Inspection**

*The Certificate of Inspection or a legible photocopy is required to be posted in a conspicuous place on the vessel approved by the inspector (usually the pilothouse). Vessels under ten tons displacement are exempt from the posting requirement; however, the Certificate of Inspection must always be on board when the vessel is operating as a Public Vessel. The Temporary Certificate of Inspection shall be kept on board as well. Both shall be made available to law enforcement or Marine Inspectors upon request.*

# OPERATOR AND CREWING REQUIREMENTS

## Licensing Of Public Vessel Operators

*Public Vessels, when underway, must have on board the licensed personnel and crew required by the Certificate of Inspection. Operating a Public Vessel without the appropriate license is a misdemeanor offense punishable by fine, imprisonment or both. An owner who permits unlicensed operation is also guilty of a misdemeanor. On all vessels, the license must be posted in the same manner as required for the display of the Certificate of Inspection.*

### *Original License General Requirements and Procedures*

*All license candidates must complete and sign a license application form. The applicant must provide all requested personal information and information relating to ability, character, education and experience. Failure to provide the requested information is grounds for license denial. Unless specifically waived by the inspector, all license applicants must pass a written examination. All applicants must meet the following requirements before taking the written examination:*

1. *Present valid photo identification (driver's license, passport) and proof of age.*
2. *Non-U.S. citizens must present proof they are legally in the United States.*
3. *Present evidence of completing a boating safety course approved by the National Association of State Boating Law Administrators (NASBLA). Acceptable certificates include the following:*
  - *New York Safe Boating Course - for course availability check our web site at [www.nysparks.com/](http://www.nysparks.com/)*
  - *United States Coast Guard Auxiliary Courses - Boating Safely or Boating Skills & Seamanship (BS&S) courses. For course availability contact a local Flotilla or go to [www.cgaux.com](http://www.cgaux.com) .*
  - *United States Power Squadrons Courses - Boat Smart or The Squadron Boating Course. For course availability contact your local Squadron or visit [www.usps.org](http://www.usps.org) .*
  - *Boating Course of Another State - A boating safety certificate issued by the government of another state that clearly indicates it was issued for completion of a NASBLA approved boating course.*
  - *On-line Boating Courses - There are many online courses currently NASBLA approved. Go to [www.nasbla.org/courseListing.php](http://www.nasbla.org/courseListing.php) . Most online courses are not approved by NYS so you may not be able to take the final exam if you list your home state as New York. Enter a surrounding state and continue with the program and remember to print out the certificate after your exam is graded.*
  - *Courses not listed above are probably not acceptable. If you are in doubt, call 518-474-0445 and ask for a Marine Inspector.*
  - *This requirement may be waived for anyone possessing a current U.S. Coast Guard license.*
4. *Applicants must have at least 30 hours of experience operating motorboats of a similar class. This requirement may also be waived for anyone possessing a current U.S. Coast Guard license.*

*Upon successful completion of the written examination and any requirements specific to the type of license being sought, the candidate is issued a temporary license valid for sixty days. The official license is normally issued within one month and is valid for one year from the date of examination. License candidates should contact this office early to request placement on the inspection/testing schedule. It may be necessary for the applicants to travel to Albany if they cannot be accommodated in the regular schedule.*

### **Specific License Types and Requirements**

**Master** - *A Master's license is required for the operation of any Public Vessel that exceeds any of the following criteria: 65-foot length; 50-ton displacement; or 65 passengers. The applicant must successfully exhibit to the inspector, during a practical examination, a thorough knowledge of seamanship, ship handling, Rules of the Road, piloting, emergency procedures plus the accepted practices of supervision and leadership of a vessel's crew. A written examination may also be required. The applicant must also, in most cases, have served at least one season as an Apprentice Master aboard the vessel with a minimum of sixty hours of piloting documented in the vessel's logbook. A letter of recommendation from the vessel's owner must be submitted with each application for*

a Master's license.

**Joint Pilot & Engineer** - This license is for use on smaller vessels, not meeting the criteria for a Master's license that requires only one person for safe operation. The applicant must demonstrate, on a written examination, a general knowledge of small boat handling, engine operation, Rules of the Road, the New York State Navigation Law, the use and maintenance of safety equipment and a thorough knowledge of emergency procedures such as fire fighting, man overboard, flooding, etc. The inspector may also require a practical exam.

**Pilot** (effective 1/1/07)- This license is required of anyone operating a public vessel carrying more than 20 but less than 65 passengers. The applicant must achieve a score of 76% on a 100 question test. This license is also normally the first step for individuals seeking a Master's license required of larger passenger carrying vessels. Once the license is issued the licensee may begin training as a Master under the direct supervision of a licensed Master. No person may train to operate or pilot a Public Vessel requiring a Master without first obtaining a Pilot's license. All training of a Pilot must be documented in the vessel's logbook for later reference by the inspector.

**Engineer** - This license is required on those larger vessels having engine spaces which require tending by someone other than the vessel's operator. In general, any vessel meeting the criteria requiring a licensed Master will also be evaluated for the need to carry an Engineer. The final determination will be made based on the following criteria:

1. Any vessel utilizing steam propulsion systems must carry an engineer.
2. Any vessel in which the propulsion machinery cannot be completely controlled from the Pilot House or there is more than one intervening deck to the engine space must carry an engineer.
3. All other vessels will be evaluated on an individual basis by the following characteristics:
  - Complexity of the Engineering Plant - This may include but is not limited to: the size, number, and horsepower of the engines; the quantity, rating and complexity of the onboard electrical generating system; the need to utilize shore power when alongside a pier; and the complexity of operating and start-up procedures.
  - Accessibility and proximity of propulsion and auxiliary machinery spaces to Pilot House, but in no case where the Pilot House is two decks or more away from the engine space.
  - Whether or not emergency equipment such as fire pumps, bilge pumps, and firefighting systems are controllable from the bridge;

Applicants for this license must exhibit, on a written and practical examination, a thorough knowledge of the entire marine plant. This includes but is not limited to basic propulsion theory, systems and operation, electric power generation, sanitary system, fire pumps, steering systems, and related auxiliary gear. They must also exhibit a complete understanding of marine safety and firefighting techniques.

### **Waivers for Licensing Requirements**

Waivers may be granted for some or all of the requirements of a given license. Waivers are not automatic and are granted on case by case basis at the discretion of the inspector. All requests for waivers must be accompanied by sufficient documentation to support the waiver request. For example, an applicant seeking a waiver based on a U.S. Coast Guard license must provide a copy of both sides of the license.

### **License Renewals**

All licenses must be renewed annually. Re-examination is usually not required; however, a short open book renewal examination will be given every five years in order to keep all licensed operators up to date on changes in the law and other safety related items. Any licensee who fails to renew his/her license by the expiration date will have until August 1st of the following year to renew the license. For example, if your license expired in June 1998, you would have until August 1, 1999 to renew without reexamination. M&RV will not notify licensees of impending license expirations. Failure to renew the license within the grace period will require reexamination prior to a new license issuance. No person may operate a Public Vessel beyond the expiration date on the license.

License Requirement Summary Table (effective 1/1/07)

LICENSE	JOINT P & E	PILOT	MASTER	ENGINEER
REQUIREMENTS	Vessels carrying 20 passengers or fewer	Vessels carrying more than 20 passengers but less than 65.	Vessels carrying in excess of 65 passengers, or that are greater than 65' in length or 50 gross tons in weight.	Vessels having engine spaces which require tending by someone other than the vessel's operator
AGE (proof required)	18	21	21	21
BOATING SAFETY COURSE	YES	YES	YES	YES
WRITTEN EXAM	50 question multiple choice exam	100 question multiple choice exam	May be required at inspectors discretion	YES - general questions re: power plants, fire fighting, etc.
PRACTICAL EXAM	Not Normally Required	At Inspector's Discretion	YES - Vessel must be conned under inspectors observation	YES - Must operate and explain various engineering systems
EXPERIENCE	Thirty hours of experience operating motorboats	Sixty hours of experience operating motorboats	One season serving as a Pilot under the direct supervision of a licensed master; min. of 60 hours bridge time, certified in the vessel's logbook.	One season working in the engine room under the supervision of a licensed engineer. Two months required if candidate is a licensed stationary engineer.
WAIVERS (at discretion of inspector)	Waiver of written examination, experience and boating safety course with a valid USCG license as Master, Mate or Operator of Uninspected Passenger Vessels (6-pack)	Waiver of written examination, boating safety course, and some or all experience with a valid USCG license as Master, Mate or Pilot for a vessel of comparable size/tonnage (25 ton minimum).	Waiver of written examination, boating safety course, and some/all experience with a valid USCG license as Master, Mate or Pilot for a vessel of comparable size or tonnage (100 ton minimum). A practical exam is still required.	USCG licensed engineer for a vessel of comparable size/horsepower /propulsion plant

(effective 1/1/07)

**Suspension or Revocation of Licenses**

The inspector may suspend or revoke any license issued pursuant to the provisions of Article 4 of the New York State Navigation Law upon satisfactory proof of: recklessness; carelessness; intemperance; incompetence; willful dereliction of duty; or willful disobedience of any lawful rule, or regulation duly made and promulgated by the Commissioner of the Office of Parks, Recreation and Historic Preservation in the Executive Department of the State New York.

Whenever any license is suspended, the holder shall forthwith deliver up his license to the inspector, who shall retain it until the time of suspension shall expire. Any such suspended person who shall refuse to deliver up such license shall be subject to a penalty of one hundred dollars for each day following such refusal.

**Crew Persons**

In addition to the required number of licensed personnel as stipulated on the certificate of inspection, vessels carrying in excess of 20 passengers are required to also carry designated crew personnel.

*Crew Person:* any person engaged or employed by a business operating a public vessel and involved with the direct operation of the vessel.

*Staff:* any person that is engaged or employed by a business operating a public vessel that may or may not be involved in the direct operation of the vessel, i.e. wait staff, bartender, musician, etc.

A member of the staff may serve as the crew person if he or she is occupying one of the positions required by the Certificate of Inspection, and has completed sufficient training. However, if the number of staff exceeds the vessels requirement for crew persons, those extra staff members are to be considered as passengers when determining capacity.

Under normal conditions, MSU does not consider a person who is briefly visiting the vessel in a consulting capacity (e.g., a vendor’s technical representative, a tour guide, mother-of-the-bride) to be neither staff nor a crew person; they are to be solely considered as passengers, whether they are paying for the trip or not.

The actual details of a particular situation will determine whether in fact the individual in question is a crew person. For clarification of any crew person or staff position aboard your vessel please contact MSU.

A crew person shall be an able bodied employee of the company trained in the safe and proper use of the vessel’s fire and safety equipment and capable of utilizing such equipment in the event of an emergency. This individual must be familiar with the layout of the vessel, location of fire fighting and lifesaving equipment and be familiar with the throttle and steering controls of the vessel should the licensed operator become incapacitated. On vessels where an engineer is not required by the certificate of inspection, each crewperson must be knowledgeable and capable of starting the fire pump and any auxiliary emergency equipment in the event of an emergency. Such individuals must be familiar with the vessel’s emergency response plan, station bill and on-board vessel communication, distress and signaling capabilities. Crew persons may also be tasked with letting go and securing the vessel alongside as well as keeping lookout when necessary. Crew persons must also be able to assist and direct passengers during emergencies.

Any individual serving as a crew person must receive annual training and orientation in the proper use of the vessel’s firefighting, life saving, visual distress, communication, propulsion and steering equipment. Such training should be noted identifying the individual so trained and be recorded in the vessel’s log book.

**Crewing Requirements**

The number of crewmembers required is based on the number deck on the vessel accessible to passenger and the total number of passengers currently on the vessel.

On vessels required to carry an Engineer, the Engineer may not be counted as one of the crewmembers provided because such duties will interfere with the operation or safety of the engineering plant.

Number of Decks	Minimum Required Crew Persons
Single deck	1

<i>Two decks</i>	2
<i>Three Decks</i>	3
<i>Four decks</i>	4

<b>Number of Passengers on board</b>	<b>Additional Crew Persons Required</b>
<i>Over 100 passengers on board</i>	<i>One Crew person for each additional 50 passengers</i>

*Vessels may carry fewer crewmembers when passenger total is lower. However, they may never carry less than the minimum crewmembers shown on the chart above under any circumstances.*

## LOG BOOK, EMERGENCY RESPONSE PLAN, DRILLS

### **Log Book**

*Every vessel certified to carry more than 20 passengers must maintain a daily log book on board the vessel. The log book shall contain all pertinent information regarding the operation and maintenance of the vessel as well as document any drills and unusual incidents occurring on board. The log shall also contain information regarding the date of each trip, the number of passengers on board as well as the names of all required licensed and crew personnel. Apprentice master working toward their license shall be noted as such in the log book. Weather conditions should also be noted.*

### **Maintenance Log**

*All vessels that carry more than 20 passenger and less than 65 will be required to keep a maintenance log. Not to be considered a daily record of a boat's operating system but a record of routine maintenance to the vessel. This would include but not limited to dates of oil changes, replacement of parts, repairs to electrical systems, pumping of dirty bilges or repairs done by an outside mechanic or marina.*

### **Engineering Log**

*All vessels that carry 65 or more passengers shall keep an engineering log book. This is a separate log from the Vessel Logbook discussed above.*

*An engineering log is a place to record the current status of the operating plant of your vessel at any given time. This log is also used as a record of operating problems encountered with equipment and the corrective action that you took. It will be a record of all inspections, troubleshoots, tests, services, adjustments, repairs, and replacement of parts, batteries, electrical system components, fuel system elements, propellers and propeller shafts, pumping assemblies and parts, and other marine engine equipment.*

*The log shall be:*

- *Hard-copy, written with pen or pencil.*
- *Record the date at the top of the page.*
- *Start a new page each day.*
- *If you use loose leaf notebook paper, then put your log entries into a binder in reverse chronological order.*
- *If you use a spiral bound notebook, then it will be kept in chronological order.*

*At a minimum a daily engineer log records should include a record of fluid levels, temperatures observed during a trip, time on the engine(s). Daily use of an engineering log is important in a professional context. By regularly writing down this information, you may find solutions to recurring problems by analyzing the data you have recorded in this book. The Engineer log provides a clear planning of a maintenance task to avoid conflicts with normal operations. Because different engines and components require proprietary service, aged by running time (in hours) and elapsed calendar time the logbook entries will bring this information to the forefront*

### **Station Bill**

*Every certified vessel rated to carry 20 or more passengers must also have a station bill posted on the bridge or at the conning station and at other locations as required by the inspector. The station bill simply outlines who does what on the board the vessel during an emergency. It indicates which crewperson reports to what piece of equipment or rescue gear during a time of emergency. It also describes which crewperson does what. Each licensed operator should be familiarized with the station bill and know their function in the event of an emergency.*

*Emergency Response Plan*

An emergency response plan should be implemented on designated vessels (vessels carrying more than 20 passengers) so that in the case of an emergency no time is lost in providing any needed medical care. This plan need not be lengthy in detail but should include as many emergency response teams and local law enforcement agencies as possible. A copy of this plan should be on board at all times, and a copy given to each organization involved. The plan should be kept with the log book or station bill on the bridge or at the conning station.

An emergency response plan should have the following:

1. A listing of phone numbers for:
  - Vessel's Owner/Operator
  - Ambulance Squads in Localities
  - Fire Departments
  - Local Marine Patrols/Law Enforcement Agencies
  - Hospitals
2. A listing of radio channels and call signs of the above.
3. A listing of locations with directions where your vessel can land along its route if the need arises for passengers to be evacuated.
4. A chart showing locations of possible landing sites showing all major and minor roads leading to and from landing sites.

### **Required Drills**

During the operation season each vessel certified to carry more than 20 passengers is required to carry out monthly drills. On smaller vessels these may be more informal training sessions whereas on larger boats must include a full drill.

**Man Overboard.** During this drill an announcement shall be made to everyone aboard that a drill is about to be undertaken. The licensed operator must decide what to use as a target to throw overboard (life ring) and ensure that each of the crew personnel know their responsibility during the drill. As this drill will likely require the retrieval of the life ring or other object in the water, those involved must wear life jackets throughout the drill. The recovering is effected through the use of a Williamson or Anderson turn. Always select a open area away from traffic for this drill. At the conclusion of the drill announce this fact to everyone on board.

**Fire and Emergency.** During this drill the licensed operator must decide on a scenario involving a fire someplace on board the vessel. Again this should be discussed with the crew ahead of time and announced to the passengers prior to execution. Once the type of fire and location are established the appropriate signal should be sounded and the crew should respond as noted on the station bill. Information regarding the status of the drill should be relayed to the bridge and once the fire or emergency is over it should be announced to the passengers.

### **Pre-Departure Requirements**

Prior to the start of operations daily, the owner/operator of the vessel is required to completely inspect the vessel and its systems for proper operation. This includes, but is not limited to, inspection of all void and below deck spaces, ensuring the proper operation of bilge pumps and alarms, ventilation blowers, pumps, watertight integrity, steering systems, communications, navigation lights, horns and safety equipment. The master shall test the radar and all communication equipment on board. If an engineer is carried on board the communication device used between the engineer and the master shall be tested. The wheel should be turned over to ensure the rudder is free. Such inspection and tests shall be noted in the vessels log book.

Prior to getting underway the operator of the vessel must make a safety and security announcement throughout the vessel. This announcement must include information with respect to the location and proper donning instructions for life jackets. In addition the location of fire extinguishers and life rings or cushions should also be pointed out. Vessels with passenger limitations on elevated decks should also make note of that fact during this announcement. Passengers should also be advised to be aware of any situation or security concern aboard the vessel and report such concerns to the crew.

# VESSEL STRUCTURE AND SYSTEMS

## VESSEL STABILITY AND STRUCTURAL SURVEY

*The marine inspector determines the number of passengers, licensed personnel and crew a Public Vessel may carry when the vessel is initially certified. This is noted on the Certificate of Inspection. It is unlawful to take aboard any Public Vessel a number of passengers greater than the number allowed on the Certificate of Inspection. For every violation of this provision, the Master, Pilot, Joint Pilot & Engineer, or owner shall be guilty of a misdemeanor.*

*The number of passengers that a vessel can carry will be determined by the marine inspector. Vessels manufactured in accordance with Coast Guard regulations and having a capacity plate will usually be certified at the capacity plate level based upon inspector's discretion. Larger vessels without a capacity plate will need to undergo a simplified stability or inclining test conducted by a naval architect or an otherwise qualified professional to determine the safe load capacity of the vessel. This will be the responsibility of the boat owner/operator. All stability tests must be witnessed by the marine inspector.*

*Any time a public vessel is structurally modified in such a way as to potentially impact the vessel's stability it will necessary for the owner to have a naval architect or an otherwise qualified professional recertify the vessel's stability to the State. Modifications can include but are not limited to the addition of an upper deck, replacement propulsion or any new or added machinery.*

*At intervals of not more than 10 years, public vessels certified to carry more than 20 passengers shall be hauled in order for the inspector to examine the hull of the vessel and shall have a naval architect or an otherwise qualified professional recertify the vessel's stability to the State. For vessels certified to carry more than 65 passengers the inspector may require a thorough structural and hull survey to be undertaken by a naval architect or qualified engineer. This survey is the responsibility of the owner. Vessels found to be deficient must be corrected or removed from service.*

*Vessels certified to carry more than 65 passengers that are seasonally hauled must notify the marine services unit so that an inspection of the underwater portion of the vessel may be undertaken.*

## PERSONS PERMITTED

*The Marine Services Unit determines the total number of persons permitted to be carried on a vessel. In determining the total number of persons permitted to be carried, the Marine Inspector will consider stability restrictions and subdivision requirements of the vessel, the vessel's route, general arrangement, means of escape, lifesaving equipment, the minimum manning requirements, and the maximum number of passengers permitted determined by the criteria set forth in this technical guidance.*

*(a) The maximum number of passengers and crew permitted shall not be more than that allowed by the manufacturers' posted capacity plate, or results of the stability test on record.*

*(b) The maximum number of passengers permitted on any vessel may be the greatest number permitted by the length of rail criterion, deck area criterion, or fixed seating criterion described in this paragraph or a combination of these criteria as allowed by paragraph (c) of this section.*

*(1) Length of rail criterion. One passenger may be permitted for each 30 inches of rail space available to the passengers at the periphery of each deck. The following rail space may not be used in determining the maximum number of passengers permitted:*

*(i) Rail space in congested areas unsafe for passengers, such as near anchor handling*

equipment or line handling gear, or access to de-embarkation areas, stairways; and rail space where persons standing in the space would block the line of vision of the licensed individual operating the vessel.

(2) Deck area criterion. One passenger may be permitted for each 10 square feet of deck area available for the passengers' use. In computing such deck area, the areas occupied by the following must be excluded:

(i) Areas for which the number of persons permitted is determined using the fixed seating criteria;

(ii) Obstructions, including stairway, elevated stages, bars, and cashier stands

(iii) Toilets and washrooms;

(iv) Spaces occupied by and necessary for handling lifesaving equipment, anchor handling equipment or line handling gear;

(v) Spaces below deck that would not normally be used by passengers;

(vi) Interior passageways less than 34 inches wide and passageways on open deck, less than 28 inches wide.

(ix) Aisle area provided in accordance with fixed seating

(3) Fixed seating criterion. One passenger may be permitted for each 18 inches of width of fixed seating.

(c) Different passenger capacity criteria may be used on each deck of a vessel and added together to determine the total passenger capacity of that vessel.

(1) Where seats are provided on part of a deck and not on another, the number of passengers permitted on that deck may be the sum of the number permitted by the seating criterion for the space having seats and the number permitted by the deck area criterion for the space having no seats.

(2) The length of rail criterion may not be combined with either the deck area criterion or the fixed seating criterion when determining the maximum number of passengers permitted on an individual deck.

(d) For vessels that use a manufacturer's capacity plate to determine the number of persons on board the vessel, the vessel shall have a fixed seat for each person the vessel is rated by the marine inspector.

(e) The master shall exclude passengers from the wheel house or conning station of the vessel and where practicable those areas where the passengers could impede the sight or actions of the master or crew when navigating the vessel. These areas shall be marked and will not be considered for determining carriage of passengers on any vessel.

## SEATING

(a) A seat must be provided for each passenger permitted in a space for which the fixed seating criterion has been used to determine the number of passengers permitted.

(b) A seat must be constructed to minimize the possibility of injury and avoid trapping occupants.

(c) Installation of seats must provide for ready escape.

(d) Seats, including fixed, temporary, or portable seats, must be arranged as follows:

(1) An aisle must be not less than 24 inches in width. If the aisle is more than 15 feet in length the aisle must be 30 inches in width. If an aisle runs over fifteen feet but leads to two points of egress the aisle may be 24 inches in width at the discretion of the marine inspector.

(2) Where seats are in rows, the distance from seat front to seat front must be not less than 30 inches and the seats must be secured to a deck or bulkhead.

(3) On vessel of less than 65 passengers seats used to determine the number of passengers permitted must be secured to the deck, bulkhead, or bulwark.

(e) Fixed seating will not include covered engine spaces or a raised deck area.

## VESSEL EGRESS

*All public vessels must have two means of egress on each level occupied by passengers. On vessels 65 feet or less in length a window of sufficient size may be used as one of the required means of escape provided it does not lead directly overboard, it can be opened or is designed to be kicked or pushed out and is suitably marked and mentioned during the pre-departure safety briefing. The two means of escape must be widely separated at opposite sides of the space so as minimize the possibility of one incident blocking both escapes.*

*The dimensions of the means of egress must be such so as to facilitate easy movement by individuals when wearing life jackets. The minimum opening for a doorway must be 32 inches; windows must be 24 inches wide.*

*On vessels greater than 65 feet in length the second means of egress must be a door or similar boarding or disembarking access point.*

*Vessels having less than 20 passengers need only have one means of egress however more are preferred.*

## DECK RAILS

*Except as otherwise provided in this section, rails or equivalent protection must be installed near the periphery of all decks of a vessel accessible to passengers or crew. Deck rails must include a top rail with the minimum height required by this section, and lower courses or equivalent protection as required by this section.*

*Deck rails must be designed and constructed to withstand a point load of 200 pounds applied at any point in any direction, and a uniform load of 50 pounds per foot applied to the top rail in any direction. The point and uniform loads do not need to be applied simultaneously.*

*Where space limitations make deck rails impractical for areas designed for crew use only, such as at narrow catwalks in way of deckhouse sides, hand grabs may be substituted.*

*The height of top rails required by this section must be as follows:*

*(1) Rails on passenger decks of a ferry or a vessel engaged in excursion trips, must be at least 39.5 inches high.*

*(2) On vessels constructed on pontoons where seating is fixed, facing inboard, and situated around the perimeter of the deck the rail height may be no less than 24 inches.*

*(3) On sport fishing boats where it can be shown that higher rails would interfere with the normal operation of the vessel, rails of at least 30 inches in height may be permitted.*

*A sailing vessel, an open boat, or any other vessel not specifically covered elsewhere in this section, must have rails of a minimum height or equivalent protection as considered necessary by the Marine Inspector, based on the vessel's operation, route, and seating arrangement.*

*Rail courses or an equivalent must be installed between a top rail required by this section of this section and the deck so that no open space exists that is more than 12 inches high, except:*

*(1) On passenger decks of a ferry or of a vessel on an excursion trip one of the following must be installed:*

- (i) Chain link fencing or wire mesh that has openings of not more than 4 inches in diameter; or*
- (ii) Bars, slats, rail courses, or an equivalent spaced at intervals of not more than 4 inches.*

*Rails must be permanently installed except that the following rails may be removable at the instruction of the marine inspector:*

- (1) Rails on parasail floats*

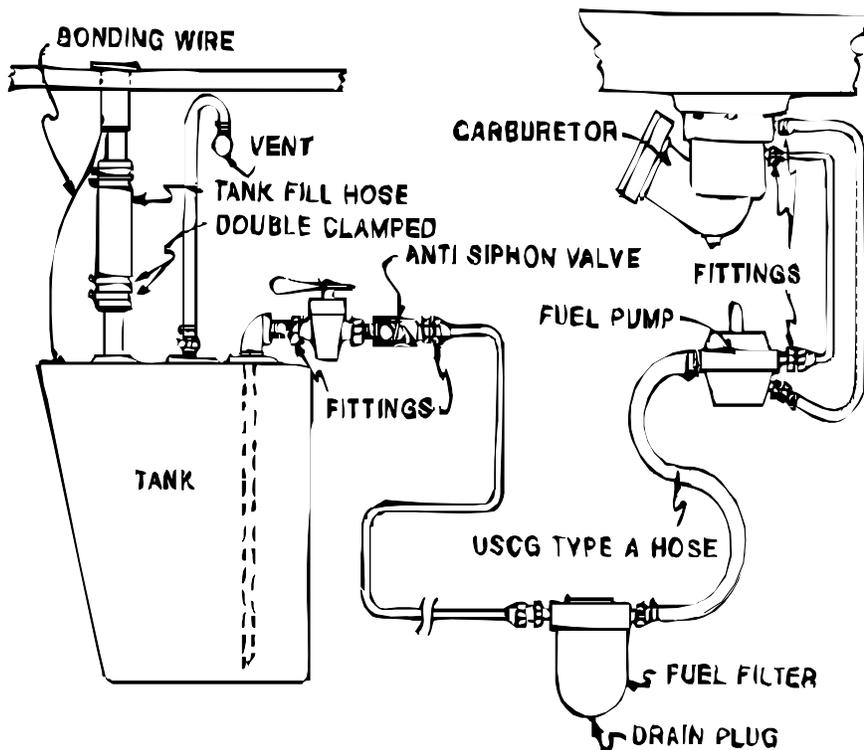
# FUEL SYSTEMS

## Fuel Fill

The fuel fill system and associated deck fitting provide the means to fill the fuel tank. The minimum inside diameter of the fill pipe must be 1 1/4 inch or if hose is used, a minimum of 1 1/2 inch. It must be large enough to prevent the blow back of fuel through the fill fitting when fueling at normal rates and the tank is 1/4 to 3/4 full. The fuel fill line shall run as directly as possible from the deck opening to the top of the fuel tank with as few bends as possible. A short straight section is ideal. The fuel fill deck opening must be located a minimum of 15 inches from any ventilation opening and positioned such that no fuel can enter the vessel if an overflow occurs while fueling. All connections in the fuel fill line must be liquid and vapor tight. If hose is used for the fuel fill it must be fire resistant, USCG Type A hose unless it is self-draining and not located in the engine compartment. The deck plate at the opening must have a permanent marking to indicate the type of fuel.

## Grounding/Bonding

A metal fuel tank and any metallic part of the fuel fill system that comes into contact with the fuel must be bonded to the vessels grounding system (usually the negative battery terminal). When flexible hose is used anywhere in the fill system a grounding wire must connect metal fittings that the hose separates. These wires must not be clamped between the hose and the fitting because this will allow leakage. The reason for grounding the vessel's fuel fill system is so that the static electricity generated by flowing fuel will be dissipated and not cause a spark which could result in an explosion. This is also why the nozzle of the fuel pump must be kept in contact with the fill opening when fueling.



## Vent Lines

Every installed fuel tank must be fitted with a vent line to allow the escape of fuel vapors when filling the tank and to prevent a vacuum from forming in the tank as the fuel is used. It must be completely independent of the fuel fill pipe or line. The vent line must have a minimum inside diameter of 7/16 inches (9/16 for flexible hose) and must be connected to the highest point of the fuel tank (under normal trim conditions). If a non-metallic material is used for the vent line it must be fire resistant hose marked as "USCG Type A Hose" unless it is self draining and located entirely outside the engine compartment. The hull termination fitting for the vent line must be located as far as practicable from any hull opening to prevent fuel vapors from reentering the vessel and to

prevent fuel overflowing at a rate of 2 gal/min or less from entering the vessel. It must be capable of minimizing the intake of water under normal operating conditions without restricting the continuous release of vapor from the

*fuel tank. The opening itself must be fitted with corrosion resistant, cleanable flame screens. The flame screen must be designed so that a spark or flame near the vent opening will not ignite vapors in the line allowing flames to reach the fuel tank and cause an explosion. It must be emphasized the vent line is not intended to be a fuel overflow. The practice of using it as such is a poor one that is both dangerous and a violation of the oil pollution laws.*

## **AUXILIARY SYSTEMS**

### **Backfire Flame Arrestor**

*A backfire flame arrestor is designed to prevent the hot flames of a backfire from leaving the engine and reaching the surrounding engine compartment where it could ignite any explosive vapors that may be present. It accomplishes this through the use of wire or metal mesh which is designed to absorb the heat from the flames thus rendering them harmless. The flame arrestor is mounted on top of the carburetor intake and bears some resemblance to an air filter. During normal engine operation the device allows air to flow freely into the carburetor. It does provide some filtering effect but this is not its function.*

*All gasoline powered engines except outboards must be equipped with a U.S. Coast Guard approved backfire flame arrestor, a U.S. Coast Guard accepted fuel and air induction system, or be designed such that the flames from a backfire would be dispersed to the atmosphere outside the vessel's hull where it would not endanger the vessel or persons on board. Regardless of the means used, all connections must be flame tight and firmly secured to withstand the vibration and shock of the marine environment and the pressure of an engine backfire. Any materials with which flames may come in contact must be metallic.*

*In addition to checking for compliance with the above paragraph, the marine inspector will check to ensure the wire mesh or grid elements of the flame arrestor are not separated or damaged which would defeat its function. The flame arrestor should not be dirty or fouled with deposits. While this will not affect its ability to arrest flames it may badly degrade engine performance. It may be cleansed using soap or a degreaser with water; be careful not to use flammable solvents.*

### **STORAGE BATTERY**

*A vessels battery(ies) must be installed in a location where it is easily accessible for maintenance or removal and above the normal level of bilge water accumulation. It shall be secured using a strap or other means such that it will not move more than one inch in any direction. To prevent accidental contact of the ungrounded battery terminal to ground, each battery shall be protected so that metallic objects cannot come into contact with the ungrounded (positive) battery terminal. This may be accomplished by means such as:*

- (1) Covering the ungrounded battery terminal with a boot or nonconductive shield,*
- (2) Installing the battery in a covered battery box, or*
- (3) Installing the battery in a compartment specially designed only for the battery(ies).*

## **BILGE AND BALLAST SYSTEMS**

### **General**

*All vessels must be provided with a satisfactory arrangement for draining all watertight compartment, other than small buoyancy compartments. All vessels shall be provided with a satisfactory bilge pumping system capable of pumping from and draining any watertight compartment except for ballast, oil and water tanks. The bilge pumping system shall be capable of operation under all practicable conditions after a casualty whether the ship is upright or listed.*

## **Definitions**

**Manually Operated** A manually operated bilge pump is a portable pump that requires a person to physically operate the pump by hand or foot. It is required to be readily accessible and must have a capacity of at least five gallons per minute (5 gpm).

**Power Operated (Small Capacity)** A power operated bilge pump is a permanently installed pump that may be driven by the main engine, an electric motor or other source of power. It must have a capacity of at least ten gallons per minute (10 gpm).

**Power Operated (Large Capacity)** A self priming power operated bilge pump, permanently connected to the bilge main or suction manifold with a capacity of at least twenty-five gallons per minute (25 gpm). It may be driven off the main engine by electric motor or other source of power.

**Individually Controlled** To be able to operate alone, independent of other pumps in the system. Switch for pump must be at operating station.

## **Bilge Pump, Type Required**

Public Vessels must be equipped with a bilge pump(s) as follows:

Table 1

Number of passengers	Length of vessel	Bilge pumps required	Minimum capacity required
Over 100 passengers		2 fixed power pumps	50 GPM
More than 49 passengers	Greater than 40 Feet	1 fixed power pump and 1 fixed hand pump	25 GPM 10 GPM
Not more than 49 passengers	26 feet up to 40 ft	1 fixed power pump and 1 portable hand pump	10 GPM 5 GPM
	Less than 26 ft.	1 portable hand pump	5 GPM

1. A second power pump is an acceptable alternative to a hand pump if it is supplied by a source of power independent of the first power bilge pump.

2. If a fixed hand pump is used to comply with Table 1, it must be permanently connected to the bilge system.

## **Bilge System**

All vessels shall be provided with a satisfactory bilge pumping system capable of pumping from and draining any watertight compartment except for ballast, oil and water tanks. The bilge pumping system shall be capable of operation under all practicable conditions after a casualty whether the ship is upright or listed. In compartments of unusual form, additional suctions may be required. All systems shall be either a piped system or an individual bilge pump system.

A vessel of at least 26 feet in length must be provided with individual bilge lines and bilge suctions for each watertight compartment, except that the space forward used for stowage of anchors need not be fitted with a bilge suction line when the arrangement of the vessel is such that ordinary leakage may be removed from this compartment by the use of a hand portable bilge pump or other equipment, and such equipment is provided.

Bilge suction must be fitted with a suitable strainer fitted properly and must be kept clear and clean at all times. In compartments of unusual form, additional suctions may be required. The opening in the hull for the pump

*discharge is placed as high above the waterline as possible*

### **Individual Bilge Pump System**

*In vessels where the installation of a piping system is not practicable the inspector may permit the substitution of a power operated pump (small capacity) in each watertight compartment less than forty feet in length provided each pump is individually controlled. In compartments of unusual form, additional pumps may be required.*

*Individual power pumps used for separate spaces are to be controlled from a central control point and must have a light or other visual means at the control point to indicate operation.*

### **Manifold System**

*Individual bilge suction lines must be led to a central control point or manifold and provided with a stop valve at the control point or manifold and a check valve at some accessible point in the bilge line. A stop-check valve located at a control point or manifold will meet the requirements for both a stop valve and a check valve.*

*A bilge pipe piercing the collision bulkhead must be fitted with a screw-down valve located on the forward side of the collision bulkhead and operable from the weather deck, or, if it is readily accessible under service conditions, a screw-down valve without a reach rod may be fitted to the bilge line on the after side of the collision bulkhead.*

*Arrangements shall be made whereby water in the compartments will drain to the suction pipes. Peak tanks, chain lockers and decks over peak tanks may be drained by eductors, ejectors, or hand pumps. Where piping is led through the forepeak.*

*Where drainage from particular compartments is considered undesirable, the provisions for such drainage may be omitted, provided it can be shown by calculations that the safety of the vessel will not be impaired.*

*Vessels shall have provision made to prevent the compartment served by any bilge suction piping from being flooded in the event the pipe is severed or otherwise damaged by collision or grounding in any other compartment. Where the piping is located a non-return valve shall be fitted to the end of the pipe in the compartment which it serves.*

*As far as practicable, each manifold must be in, or be capable of remote operation from; the same space as the bilge pump that normally takes suction on that manifold. In either case, the manifold must be capable of being locally controlled from above the floor plates and must be easily accessible at all times. As far as practicable, each overboard-discharge valve for a bilge system must comply with the requirements governing location and accessibility for suction manifolds.*

### **Common Pipe Bilge System**

*A common-pipe bilge system may be installed as an acceptable alternative to the system required by paragraphs of this section, provided it satisfies all of the following criteria:*

- (i) The common-pipe main runs inboard at least one-fifth of the beam of the vessel.*
- (ii) A stop-check valve or both a stop valve and a check valve are provided in each branch line and located inboard at least one-fifth of the beam of the vessel.*
- (iii) The stop valve or the stop-check valve is power-driven, is capable of remote operation from the space where the pump is, and, regardless of the status of the power system, is capable of manual operation to both open and close the valve.*

*A vessel employing a common-pipe bilge system, each bilge-manifold valve controlling bilge suction from any compartment must be of the stop-check type.*

### **Bilge Pumps**

**A portable hand bilge pump** must be:

- (1) Capable of pumping water, but not necessarily simultaneously, from all watertight compartments; and
- (2) Provided with suitable suction hose capable of reaching the bilge of each watertight compartment and discharging overboard.

Each fixed power bilge pump must be self priming. It may be driven off the main engine or other source of power. It must be permanently connected to the bilge manifold and may also be connected to the fire main. If of sufficient capacity, a power bilge pump may also serve as a fire pump.

Where two fixed power bilge pumps are installed, they must be driven by different sources of power. If one pump is driven off the main engine in a single propulsion engine installation, the other must be independently driven. In a twin propulsion engine installation, each pump may be driven off a different propulsion engine.

**A submersible electric bilge pump** may be used as a power bilge pump required by Table 1 only on a vessel of not more than 65 feet in length carrying not more than 49 passengers provided that:

- (1) The pump is listed by Underwriters' Laboratories Inc. or another independent laboratory;
- (2) The pump is used to dewater not more than one watertight compartment;
- (3) The pump is permanently mounted;
- (4) The pump is equipped with a strainer that can be readily inspected and cleaned without removal;
- (5) The pump discharge line is suitably supported;
- (6) The opening in the hull for the pump discharge is placed as high above the waterline as possible;
- (7) A positive shutoff valve is installed at the hull penetration; and
- (8) The capacity of the electrical system, including wiring, and size and number of batteries, is designed to allow all bilge pumps to be operated simultaneously.
- (9) A flexible tube or hose may be used instead of fixed pipe for the discharge line of a submersible electric bilge pump provided the hose or tube does not penetrate any required watertight bulkheads and is:
  - (a) Of good quality and of substantial construction, suitable for the intended use; and
  - (b) Highly resistant to salt water, petroleum oil, heat, and vibration.

On a vessel of not more than 65 feet in length, a power driven fire pump may serve as a fixed power bilge pump, provided it has the minimum flow rate required by Table 1.

On a vessel of more than 65 feet in length, a power driven fire pump may serve as one of the two fixed power bilge pumps required by this subpart, provided:

- (1) The bilge and fire pump systems are interconnected;
- (2) The dedicated bilge pump is capable of pumping the bilges at the same time the fire/bilge pump charges the fire main; and
- (3) Stop valves and check valves are installed in the piping to isolate the systems during simultaneous operation and prevent possible flooding through the bilge system.

### **Bilge System Pipe Sizing**

A bilge pipe in a vessel of not more than 65 feet in length must be not less than 25 millimeters (1 inch) nominal pipe size. A bilge pipe in a vessel of more than 65 feet in length must be not less than 1.5 inches nominal pipe size.

### **Bilge High Level Alarms**

On a vessel of at least 26 feet in length, a visual and audible alarm must be provided at the operating station to indicate a high water level in each of the following normally unmanned spaces:

1. A space with a through-hull fitting below the deepest load waterline, such as a lazarette;
2. A machinery space bilge, bilge well, shaft alley bilge, or other spaces subject to flooding from sea water piping within the space; and
3. A space with a non-watertight closure, such as a space with a non-watertight hatch on the main deck.

*High water alarms must be tested once a month and logged in the engineering log book.*

### **Ballast**

*Any solid fixed ballast used must be:*

- (1) Stowed in a manner that prevents shifting of the ballast; and*
- (2) Installed to the satisfaction of the state marine inspector.*

*Solid fixed ballast may not be located forward of the collision bulkhead unless the installation and arrangement of the ballast and the collision bulkhead minimizes the risk of the ballast penetrating the bulkhead in a collision.*

*Solid fixed ballast may not be removed from a vessel or relocated unless approved by the state marine inspector except that ballast may be temporarily moved for a vessel examination or repair if it is replaced to the satisfaction of the state marine inspector.*

*Water ballast, either as an active system or permanent, must be approved by the Marine Services Unit, NYS Parks.*

### **Wiring for Pumps and Alarms**

*Wiring for the high water alarms must be separate from the bilge systems. An alarm indicator, visual or sound must be at the operator's station. The alarm indicator may cover one or all the compartments.*

*Electrical bilge pumps may be operated by a float switch and must have an indicator at the operator station acknowledging that the pump is operating. A second manual switch shall be located at the operator station to allow for remote operation of the bilge pump.*

### **Testing and Inspections**

*All bilge pumps will be tested in the presence of a state marine inspection at the vessel's annual inspection. You will need to have enough water in your bilge for this test. You are also required to have a means of capturing any oily water that may be pumped through the bilge pump system.*

*High water alarms will be tested in the presence of a state marine inspection at the vessel's annual inspection.*

# REQUIRED SAFETY EQUIPMENT

Equipment required on board a public vessel is specified in section 67 of the NYS Navigation Law and section 449 of the NYS Code of Rules and Regulations.

## PERSONAL FLOTATION DEVICES (PFDS)

### Carriage Requirements

All PFDS carried on Public Vessels must be U.S. Coast Guard approved, in good serviceable condition and in the quantity, type, and size stated in the following sections.

#### **Wearable Device**

All Public Vessels are required to carry a minimum of one Type I Adult size PFD for each passenger and crew member as specified on the vessel's Certificate of Inspection, regardless of how many people are actually on board. In addition to this amount, each vessel must carry an amount of Type I child size PFDS equal to ten percent of the adult requirement. If the vessel's operation is such that large numbers of children under 90 pounds are often carried, the owner must provide sufficient numbers of child size PFDS. Conversely, if children are never carried on board, the ten percent requirement may be waived and this will be noted on the Certificate of Inspection. Wearable PFDS must be readily accessible to all passengers.

#### **Exception to Type I PFD Requirement**

The inspector MAY permit a vessel engaged in water skiing or parasailing activities to substitute Type III PFDS for the required Type I with the stipulation that they must be worn. If this exception is found to be abused it may be revoked at the inspectors discretion. Type III PFDS must be of the type approved for waterskiing which are impact rated as specified on the device's label.

#### **Throwable/Rescue Devices**

All Public Vessels must carry one or more Type IV PFDS, as listed below, which must be immediately accessible to either the operator or crew. It must be capable of being cast loose in an emergency and shall not be permanently secured to the vessel in any way.

- a) Vessels less than 26 feet must carry at least one Type IV PFD ring buoy or buoyant cushion.
- b) Vessels 26 feet to less than 65 feet in length must carry at least two ring buoys. A cushion is not acceptable.
- c) Vessel 65 feet or more must carry four or more ring buoys as determined by the Marine Inspector. One located on each side of the pilot house and the remainder to be placed in accessible locations elsewhere on the vessel as directed by the inspector.

#### **Stowage of PFDS**

PFDS must be stowed in open or otherwise well marked locations where they are readily accessible to all passengers and crew. Preferably they should stowed on the overhead or beneath benches for immediate use if needed. They may be also be stowed in designated deck boxes provided these boxes are not locked or secured in any fashion which might hamper immediate access. Life jackets should never be stowed in their original plastic packaging and belts may not be knotted or tied. Life jackets should be stowed in a dry and well ventilated area so as to protect the PFDS. PFD stowage locations must be clearly marked in lettering at least 1 1/2 inches in height and of a contrasting color on larger vessels. PFDS must be adequately dispersed throughout the vessel for ease of access and to prevent congestion in one area during an emergency. Overhead stowage for PFDS must be such that space is left between the device and the overhead to allow for ventilation and easy removal. Wooden slats or ropes used to hold the devices in the overhead must be installed so that the PFDS may be quickly removed with

minimal effort.

## FIRE EXTINGUISHERS

### **Carriage Requirements (NYCRR 449.3)**

Any fire extinguisher used on a public vessel must be U.S. Coast Guard approved for marine use. It must be secured in position with a quick release type bracket designed for use with the model extinguisher used. It must be located so that it is easily accessible to the operator and, if possible, out of the reach of children. The operator should check frequently to ensure fire extinguishers are in their proper storage brackets and free of damage and corrosion. Damaged or dry-rotted hoses should be replaced. Nozzles should be kept free of obstructions. Extinguishers with pressure gauges should read within the "charged" area (usually green). Locking pins and sealing wires should be checked to assure that the extinguisher has not been used or tampered with since it was last recharged. While the vessel owner may do many of the inspections required for fire extinguishers, it is strongly urged that personnel qualified in such areas (i.e. local fire co.) perform them. The table below lists the minimum number of fire extinguishers that must be carried by a Public Vessel based on its length.

<b>Length of Vessel</b>	<b>Number of Portable Extinguishers Required</b>
<i>Boats under 26 feet</i>	<i>One B-I</i>
<i>Boats 26 feet to less than 40 feet</i>	<i>Two B-I or One B-II</i>
<i>Boats 40 feet and longer</i>	<i>As directed by the inspector but minimum of three B-I</i>

Notes:

1. At least one extinguisher must be located near the operator's station.
2. Any vessel with other than outboard propulsion that is exempted from installing a fixed extinguishing system must carry one additional B-I extinguisher.

## FIXED FIRE EXTINGUISHING SYSTEMS

Fixed systems, as the name implies, are permanently installed in compartments where fire is most likely to occur (i.e. engine spaces). These systems are ideal for quickly and effectively extinguishing class B fires in enclosed spaces. They are more efficient and much safer than trying to extinguish this type of fire with a hand held extinguisher.

Fixed systems are required on all public vessels with enclosed engine spaces unless specifically exempted in writing on the Certificate of Inspection. The components and installation of a fixed system is dependent upon the extinguishing agent used. The volume of the space to be protected and the relative effectiveness of the agent used determine the size of the system (amount of agent). Operation of the system may be either manual or automatic. If manually activated, the actuating device must be located outside the protected space near the operator. All fixed extinguishing systems used aboard Public Vessels must be U.S. Coast Guard approved.

Fixed extinguishing system components should be inspected periodically to ensure that cylinders are free of corrosion, that discharge nozzles are free of obstructions, and that the system is generally in good working order. In addition the cylinders or containers holding the extinguishing agent should be removed and taken to qualified personnel to be inspected, weighed, and if necessary recharged. A tag should be attached to the cylinder indicating the date and name of the person performing this inspection. This must be done once every three years.

## VISUAL DISTRESS SIGNALS (VDS)

All Public Vessels must carry U. S. Coast Guard approved visual distress signals on board at all times. Each vessel shall have three day-night, hand-held flares, or one orange distress signal flag and three night flares. The prescribed distress flag must be at least 3 feet by 3 feet with a black square and ball placed on the orange background – a plain orange or red flag is not considered sufficient. The table below indicates acceptable devices and the amounts required to be carried.

All approved pyrotechnic devices (flares and smoke) are marked with an expiration date that is 3 1/2 years from the date of manufacture. Devices that have exceeded their expiration date are no longer serviceable and must be replaced.

<b>Device Description</b> <i>(USCG Approval No.)</i>	<b>Accepted for Use During</b>	<b>Number Required</b>
<i>Hand held flares (160.021)</i>	<i>Day &amp; Night</i>	<i>3</i>
<i>Orange Flag</i>	<i>Day only</i>	<i>1</i>
<i>Pistol Launch Aerial Red Meteor or Parachute Flares with approved launcher (160.024)</i>	<i>Day &amp; Night</i>	<i>3</i>

## ANCHOR AND RODE

All Public Vessels must carry an anchor of an appropriate type, weight, and strength to hold the vessel securely during all weather conditions characteristic to the waterway upon which the vessel will operate.

In addition to carrying an anchor, each Public Vessel must have a rode or anchor line of sufficient length and strength to match the anchor and hold the vessel in place. The anchor rode must be made up or attached to the anchor at all times.

## HORN OR WHISTLE

All Public Vessels must be equipped with a horn or whistle capable of producing a four-to-six second blast, audible at a range of at least one-half mile from the vessel. The whistle and its actuating mechanism must be permanently installed in the vessel. It must be electro-mechanical, air, or steam actuated and capable of being sounded by the operator at the helm.

Public Vessels less than thirty-nine feet in length may utilize a portable sound signaling device such as a mouth whistle, hand-held air horn, or similar device in lieu of a permanently installed device provided it meets all of the criteria listed above. A portable device must be kept in a position that is immediately accessible to the operator of the vessel.

## **BELL**

*Public Vessels greater than thirty-nine feet in length are required to be equipped with a bell. The bell must be permanently mounted to the vessels exterior structure in the vicinity of the control station. A lanyard or wire must be attached to the bell's clapper to enable the operator to sound the bell from the control station.*

### **Equipment Marking**

*All Public Vessel equipment listed in this chapter must be stenciled with the vessels name or registration number. This requirement serves as a means of identification in the event of a casualty, loss, or theft. It further serves to ensure that equipment is not easily transferred between vessels.*

## **NAVIGATION EQUIPMENT**

*Vessels certified to carry more than 20 passengers must be equipped with either an operational VHF radio or cellular phone (provided there is sufficient coverage) for emergency communication purposes.*

*Vessels certified to carry 65 or more passengers must be equipped with a marine radar system for navigational use during periods of reduced visibility, in addition to a VHF radio or cellular phone.*

*Both of these items must be in good operating condition at all times while the vessel is underway. In areas without adequate cellular phone service, a VHF radio will be required.*

## **VENTILATION**

### **Natural Ventilation**

*Every Public Vessel which uses gasoline engines, for electrical power generation or propulsion (i.e. inboard, outboard, I/O) must provide a natural ventilation system to service each compartment, not open to the atmosphere, that meets one or more of the following criteria:*

*Compartments that contain a permanently installed gasoline engine.*

*Each compartment that has openings between it and a compartment that requires ventilation, where the aggregate area of those openings exceeds 2 percent of the area between the compartments. (Exception: An accommodation compartment above a compartment requiring ventilation that is separated from the compartment requiring ventilation by a deck or other structure).*

*Each compartment that contains a permanently installed fuel tank and an electrical component that is not ignition protected.*

*Each compartment that contains a fuel tank which vents into that compartment, such as a portable gas tank used with most outboards.*

*Contains a non-metallic fuel tank. Many portable gas tanks used with outboards are now made of plastic.*

### **Power Ventilation**

*Every gasoline powered Public Vessel, regardless of the year in which it was built, must have a power ventilation system (i.e. blower) to service each compartment that contains a permanently installed engine (i.e. inboard, inboard/outdrive, generator). An engine located in a compartment that is open to the atmosphere is exempt from this requirement. Personal watercraft (i.e. Jet-Ski, Sea-Doo, etc.) are exempt from the federal manufacturing standard requiring a blower.*

A power ventilation system consists of an electric exhaust blower or blowers and a duct system. Each blower must be ignition protected and mounted in an exhaust duct such that it does not interfere with the free flow of air through the duct when the blower is not operating. The blower shall be mounted above the normal level of accumulated bilge water, preferably next to the exhaust cowl. The blades of the blower shall be non-sparking in relation to their housing. Additionally, the blower must have an air flow rate and capacity such that it will accomplish a complete change of air in the protected in the four-minute time frame. Blowers shall be installed with ducts whose intake openings are:

1. Permanently fixed;
2. Located in the lower one-third of the compartment;
3. Above the normal level of accumulated bilge water; and
4. As nearly as practicable below the engine (s) which it serves.

The power exhaust ventilation blower switch shall be located at the helm position and must be independent of the ignition switch! A conspicuous placard shall be mounted adjacent to this switch, which shall contain the following legend:

<p style="text-align: center;"><b>WARNING</b> <b>Gasoline vapors can explode</b> Before starting the engine: Check engine compartment for gasoline or vapors. Operate the blower for at least four minutes. Run the blower below cruising speed.</p>
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### **Maintenance**

As with any system, maintenance of your vessels ventilation system is essential to its continued effective operation. Ventilation systems are relatively simple and maintaining them is primarily a matter of making frequent visual inspection. This should include:

Check intake and exhaust cowls for clogging by debris such as insect or bird nests, leaves, etc;  
Check intake and exhaust ducts to ensure that they are properly supported free of damage and kinks and are not full of water in flat or sagging sections. Ensure the ends are above normal bilge level. Mice, squirrels, and other small animals find these to be ideal nest locations  
Check blower to be sure it operates when the switch is turned on.  
Each time, while operating the blower for four minutes prior to starting the engine, place your hand over the exhaust cowl. You should feel a strong rush of air exiting the cowl. If not, something is wrong and a closer inspection should be made.  
If any problems are detected, correct them immediately.

Any maintenance conducted on board any vessel certified to carry more than 20 passengers is to be recorded in the log book as well as a maintenance log which is kept ashore. Any time major components to any propulsion, fuel system or ventilation system are replaced the Marine Inspectors shall be notified.

SUMMARY OF EQUIPMENT CARRIAGE REQUIREMENTS

<i>Item</i>	<i>Vessels Under 26'</i>	<i>Vessels 26 - 40'</i>	<i>Vessels Over 40'</i>
<i>Anchor</i>	<i>1 appropriate size</i>	<i>1 appropriate size</i>	<i>2 appropriate size</i>
<i>Rode</i>	<i>5 - 7 X depth of water</i>	<i>5 - 7 X depth of water</i>	<i>5 - 7 X depth of water</i>
<i>Horn</i>	<i>Yes-installed or portable</i>	<i>Yes - installed &lt;39' portable allowed</i>	<i>Yes - installed</i>
<i>Bell</i>	<i>No</i>	<i>Over 39' - Yes</i>	<i>Yes</i>
<i>PFD - Adult</i>	<i>1 Type I per person</i>	<i>1 Type I per person</i>	<i>1 Type I per person</i>
<i>PFD - Child</i>	<i>10% of capacity</i>	<i>10% of capacity</i>	<i>10% of capacity</i>
<i>Type IV PFD</i>	<i>1 cushion or ring</i>	<i>2 ring buoys</i>	<i>2 ring buoys 4 ring buoys over 65' or as directed</i>
<i>Portable Extinguishers</i>	<i>1 size B-1</i>	<i>2 size B-1</i>	<i>as directed</i>
<i>Installed Extinguishers</i>	<i>Outboard - No Inboard or I/O - Yes</i>	<i>Outboard - No Inboard or I/O - Yes</i>	<i>Outboard - No Inboard or I/O - Yes</i>
<i>Distress Equipment</i>	<i>Yes PWC must have flag</i>	<i>Yes</i>	<i>Yes</i>
<i>Backfire Flame Arrester</i>	<i>Outboard - No Inboard or I/O - Yes</i>	<i>Outboard - No Inboard or I/O - Yes</i>	<i>Outboard - No Inboard or I/O - Yes</i>
<i>Blower</i>	<i>Inboard Gasoline Engines</i>	<i>Inboard Gasoline Engines</i>	<i>Inboard Gasoline Engines</i>
<i>Bilge Pump</i>	<i>1 hand or power</i>	<i>1 hand &amp; 1 power</i>	<i>1 or more powered pumps (25gpm) as directed</i>
<i>Log Book /Station Bill</i>	<i>No</i>	<i>No</i>	<i>Yes - vessels over 65', 50 tons or 20 passengers</i>



**MASTER'S PRACTICAL EXAM**

**Preparation**

Log Book Opened/Entries Made YES / NO  
 Chart Available YES / NO  
 Radio Checked YES / NO  
 Engine Order Device Checked YES / NO  
 Bridge to E/R Communication Checked YES / NO  
 Navigational Equipment Checked YES / NO  
 Helm Checked YES / NO

**Undocking**

Public Address Announcement YES / NO  
 Letting Go Safety Observed Inattentive to Safety, Haste  
 Engine Orders Proper, Effective Improper, Ineffective  
 Rudder Commands Discernible, Effective Improper, Ineffective  
 Sound Signals Observed / Neglected  
 Alertness to Traffic Good / Fair / Poor

**Underway**

Attention to Helm Good / Fair / Poor  
 Attention to Traffic Good / Fair / Poor  
 Rules of Road/ Signals & Maneuvers Good / Fair / Poor  
 Knowledge of Handling Characteristics Good / Fair / Poor  
 Knowledge of Waterway/Routes Good / Fair / Poor  
 Emergency Response Plans Good / Fair / Poor

**Man Overboard Drill**

Attentiveness to Passed Word Alert, Responsive Slow to Respond  
 Not Knowledgeable of Response  
 Rudder Commands Quick, Effective Slow, Wrong  
 Sound Signal Observed / Neglected  
 Engine Orders Timely, Proper Late, Unobserved  
 Victim Sighted Yes / No  
 Crew Response / Rescue Good / Fair / Poor  
 Proper Lifesaving Gear Used Yes / No

**Fire and Emergency Drill**

Attentiveness to Passed Word Alert, Responsive Slow to Respond  
 Not Knowledgeable of Response  
 Engine Orders Observed / Neglected  
 Sound Signals Observed / Neglected  
 Maneuvering Observed / Neglected  
 Response to Hypothetical Situation Knowledgeable, Proper Unsure, Wrong  
 Gear Used Yes / No  
 Extinguisher Suggested / Method Proper / Improper  
 Hoses Led Out Yes / No  
 Fire Pump Charged Yes / No

**Docking**

Approach to Dock Proper Angle, Prudent Speed Poor Approach, Too Fast  
 Public Address Announcement Yes / No  
 Engine Orders Timely, Proper Excessive, Wrong  
 Rudder Command Effective / Excessive  
 Making Fast Good / Fair / Poor

ACCIDENT REPORT FORM

<b>BOATING ACCIDENT REPORT</b>																																																						
The operator/owner of a recreational vessel is required to report in writing whenever an accident results in the loss of life, disappearance from the vessel, injury requiring treatment beyond first aid, or property damage in excess in \$500 or the complete loss of a vessel. Cases of death or injury must be reported to local police immediately and to OPRHP within 48 hours. All other accidents must be reported within 5 days of the occurrence. Reports can be mailed to OPRHP, Empire State Plaza, Agency Building 1, Albany, NY 12238. Phone 518/474-0445																																																						
ACCIDENT DATA	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Date of Accident</td> <td>Time</td> <td>am pm</td> <td>Waterway</td> <td>Nearest City/Town</td> </tr> <tr> <td># of Vessels</td> <td colspan="2">Location</td> <td>County</td> <td>State</td> </tr> <tr> <td colspan="2">                     Weather  <input type="checkbox"/> Clear   <input type="checkbox"/> Rain  <input type="checkbox"/> Cloudy   <input type="checkbox"/> Snow  <input type="checkbox"/> Fog   <input type="checkbox"/> Haze                 </td> <td colspan="2">                     Water Conditions  <input type="checkbox"/> Calm (waves &lt; 6")  <input type="checkbox"/> Choppy (6" - 2')  <input type="checkbox"/> Rough (2' - 6')  <input type="checkbox"/> Very Rough (waves &gt; 6')  <input type="checkbox"/> Strong Current                 </td> <td>                     Temperatures (estimate)                      Air _____ f                      Water _____ f                 </td> <td>                     Wind  <input type="checkbox"/> None  <input type="checkbox"/> Light (0-6mph)  <input type="checkbox"/> Moderate (7-14)  <input type="checkbox"/> Strong (15-25)  <input type="checkbox"/> Storm (over 25 mph)                 </td> <td>                     Visibility                      Day   Night  <input type="checkbox"/> Good   <input type="checkbox"/>  <input type="checkbox"/> Fair   <input type="checkbox"/>  <input type="checkbox"/> Poor   <input type="checkbox"/> </td> </tr> <tr> <td colspan="2">Operator Name</td> <td>                     Male                      Female                 </td> <td>Operator Phone Number</td> <td>Age</td> <td>Date of Birth</td> </tr> <tr> <td colspan="2">Operator Address</td> <td colspan="2">Formal Instruction</td> <td colspan="2">Operator's Experience</td> </tr> <tr> <td colspan="2"></td> <td colspan="2"> <input type="checkbox"/> None   <input type="checkbox"/> USCG Auxiliary  <input type="checkbox"/> State Course   <input type="checkbox"/> Am.. Red Cross  <input type="checkbox"/> U.S. Power Squadron                 </td> <td colspan="2"> <input type="checkbox"/> None  <input type="checkbox"/> Under 100 Hours  <input type="checkbox"/> 100 Hours or More                 </td> </tr> <tr> <td colspan="2">Owner Name</td> <td colspan="4">Owner Address</td> </tr> <tr> <td colspan="2">Owner Phone Number</td> <td># of People on Board</td> <td># of People Being Towed</td> <td colspan="2">Rented Boat?</td> </tr> <tr> <td colspan="2"></td> <td></td> <td></td> <td colspan="2"> <input type="checkbox"/> Yes   <input type="checkbox"/> No                 </td> </tr> </table>	Date of Accident	Time	am pm	Waterway	Nearest City/Town	# of Vessels	Location		County	State	Weather <input type="checkbox"/> Clear <input type="checkbox"/> Rain <input type="checkbox"/> Cloudy <input type="checkbox"/> Snow <input type="checkbox"/> Fog <input type="checkbox"/> Haze		Water Conditions <input type="checkbox"/> Calm (waves < 6") <input type="checkbox"/> Choppy (6" - 2') <input type="checkbox"/> Rough (2' - 6') <input type="checkbox"/> Very Rough (waves > 6') <input type="checkbox"/> Strong Current		Temperatures (estimate) Air _____ f Water _____ f	Wind <input type="checkbox"/> None <input type="checkbox"/> Light (0-6mph) <input type="checkbox"/> Moderate (7-14) <input type="checkbox"/> Strong (15-25) <input type="checkbox"/> Storm (over 25 mph)	Visibility Day   Night <input type="checkbox"/> Good <input type="checkbox"/> <input type="checkbox"/> Fair <input type="checkbox"/> <input type="checkbox"/> Poor <input type="checkbox"/>	Operator Name		Male Female	Operator Phone Number	Age	Date of Birth	Operator Address		Formal Instruction		Operator's Experience				<input type="checkbox"/> None <input type="checkbox"/> USCG Auxiliary <input type="checkbox"/> State Course <input type="checkbox"/> Am.. Red Cross <input type="checkbox"/> U.S. Power Squadron		<input type="checkbox"/> None <input type="checkbox"/> Under 100 Hours <input type="checkbox"/> 100 Hours or More		Owner Name		Owner Address				Owner Phone Number		# of People on Board	# of People Being Towed	Rented Boat?						<input type="checkbox"/> Yes <input type="checkbox"/> No	
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<p><b>LEGAL STATEMENT:</b> The Office of parks, Recreation &amp; Historic Preservation is authorized to collect this information by Chapter 140 of the Laws of 1970 and Section 47 of the Navigation Law. It will be used for statistical purposes and will be forwarded to the US Coast Guard pursuant to federal regulations. Failure to provide the requested information may subject you to legal sanction. This information will be maintained by the Director of Marine &amp; Recreational Vehicles, OPRHP, Agency Bldg. #1, Empire State Plaza, Albany, NY 12238, 518/474-0445. This information may be disclosed pursuant to the Freedom of Information Law.</p>																																																						

Case Number: \_\_\_\_\_

DECEASED	Name of Victim		<input type="checkbox"/> Male	Name of Victim		<input type="checkbox"/> Male
			<input type="checkbox"/> Female			<input type="checkbox"/> Female
	Address of Victim			Address of Victim		
Date of Birth	Cause of Death	<input type="checkbox"/> Drowning <input type="checkbox"/> Other <input type="checkbox"/> Disappearance	Was PFD Worn? <input type="checkbox"/> Yes <input type="checkbox"/> No	Date of Birth	Cause of Death	<input type="checkbox"/> Drowning <input type="checkbox"/> Other <input type="checkbox"/> Disappearance
/ /				/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No
INJURIES	Name of Victim		Date of Birth	Name of Victim		Date of Birth
			/ /			/ /
	Address of Victim			Address of Victim		
	Medical treatment Beyond First Aid?		<input type="checkbox"/> Yes <input type="checkbox"/> No	Medical treatment Beyond First Aid?		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Admitted to Hospital?		<input type="checkbox"/> Yes <input type="checkbox"/> No	Admitted to Hospital?		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Describe Injury			Describe Injury		
Was a PFD Worn?		<input type="checkbox"/> Yes <input type="checkbox"/> No	Was a PFD Worn?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Prior to the Accident?		<input type="checkbox"/> Yes <input type="checkbox"/> No	Prior to the Accident?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
As a Result of the Accident?		<input type="checkbox"/> Yes <input type="checkbox"/> No	As a Result of the Accident?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Was the PFD Inflatable?		<input type="checkbox"/> Yes <input type="checkbox"/> No	Was the PFD Inflatable?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Property Damage This Boat \$ _____		Describe Property Damaged				
Estimated Amount: Other Boat(s) \$ _____						
Other Property \$ _____						
OTHER VESSEL	Name of Operator		Operator Address			
	Operator Phone #	Registration/Document #	State	Owner Phone #		
	Owner		Owner Address			
	Sequence of events. Continue on additional sheets if necessary. Include any information regarding the involvement of drugs or alcohol in causing or contributing to the accident. Please include any descriptive information regarding the use of PFD's.					
ACCIDENT DESCRIPTION						Diagram
						
WITNESSES	Name	Address			Phone #	
	Name	Address			Phone #	
	Name	Address			Phone #	
	Name & Address of Person Completing Report				Phone #	
Signature				<input type="checkbox"/> Operator <input type="checkbox"/> Investigator	Date Submitted	
				<input type="checkbox"/> Owner <input type="checkbox"/> Other		
OPRHP USE ONLY	Primary Cause		<input type="checkbox"/> This report <input type="checkbox"/> Both	Date Reviewed		
			<input type="checkbox"/> Investigation <input type="checkbox"/> Undetermined			