



16700
December 20, 2017

GOLD DREDGE SAFETY HANDOUT 2018

Commercial Vessel Safety Requirements for Gold Dredge Operations in Nome, Alaska

- Ref:
- (a) Customs Service Decision 79-331
 - (b) Title 46 United States Code §55109 (46 U.S.C. §55109)
 - (c) 46 U.S.C. §2101
 - (d) Title 46 Code of Federal Regulations §67.7 (46 C.F.R. §67.7)
 - (e) 33 C.F.R. Part 173
 - (f) 46 C.F.R. Subchapter I—Cargo and Miscellaneous Vessels
 - (g) 46 C.F.R. Subchapter C—Uninspected Vessels
 - (h) 46 C.F.R. §15.805(a)(1)
 - (i) 46 C.F.R. §15.820
 - (j) 46 C.F.R. §15.410
 - (k) 46 C.F.R. Subchapter M—Inspected Towing Vessels
 - (l) 46 C.F.R. Subpart 42.07
 - (m) 29 C.F.R. Subpart T—Commercial Diving Operations
 - (n) 33 C.F.R. Subchapter D—International Navigation Rules
 - (o) 46 C.F.R. Part 4—Marine Casualties and Investigations
 - (p) 46 C.F.R. Part 16—Chemical Testing

OVERVIEW: A large variety of vessels dredge for gold in waters within three nautical miles seaward of the territorial sea baseline near Nome, Alaska during ice-free months. The Coast Guard promotes the safety of vessel operators and protection of the marine environment by enforcing regulations applicable to these vessels. The specific commercial standards that apply to each vessel depend on the vessel's length, tonnage, age, area of operation, and means of propulsion. This Marine Safety Information Bulletin (MSIB) explains the Coast Guard's oversight program.

PUBLICATIONS AFFECTED: Sector Anchorage MSIB 01-17 regarding dredge operations in Western Alaska is canceled.

VESSEL TYPES: The Coast Guard considers a *dredge vessel* to be any type of floating dredge, including excavators and dive platforms. The term includes jack-up dredges that float into position, but excludes bottom crawlers. A *self-propelled dredge vessel* has its own motorized propulsion unit(s), while a *non-self-propelled dredge vessel* is a barge that relies on another vessel for movement. A non-self-propelled dredge vessel may still have some form of propulsion to assist with maneuverability or positioning, but will still be classified as non-self-propelled if

the vessel relies on a second vessel for movement beyond docking and undocking. The term *towing vessel* applies to any self-propelled vessel used to push or pull another vessel.

COMMERCIAL STATUS: The Coast Guard considers all gold dredges operating in the vicinity of Nome to be commercial (vice recreational) vessels. Per reference (a), Customs has long held that the term *dredging* means “the use of a vessel equipped with excavating machinery in digging up or otherwise removing submarine material.” Reference (b) applies the coastwise trade laws of the United States to vessels engaged in dredging, with the allowance that Alaskan gold dredge vessels may be documented under either a *registry* or *coastwise* endorsement. *Registry* and *coastwise* are both endorsements on a vessel’s Certificate of Documentation that are not *recreational* endorsements. Though vessels smaller than five net tons need not be federally documented, reference (b) implies that all dredge vessels are, by nature of their function, other than recreational. Reference (c) defines a recreational vessel as one that is “operated primarily for pleasure.” Absent regulations that differentiate between commercial and recreational gold dredging, all vessels engaged in dredging for gold will be subject to the same regulatory framework applicable to other vessels not operating purely for pleasure.

TONNAGE: Because many regulations depend on *net tonnage* and *gross registered tonnage (GRT)*, miners must know these measurements for their vessel. To determine tonnage for vessels less than 79 feet in length, use the fill-able form available at: <http://homeport.uscg.mil/Lists/Content/Attachments/293/CG-5397.pdf>. If you have limited computer access or difficulty getting the form to calculate the tonnage of your vessel, call Sector Anchorage for assistance. If vessel tonnage is not clear to an attending Coast Guard Inspector, dredge operators may be required to hire an accredited naval architect, marine surveyor, or similar professional to complete tonnage measurements (Society of Accredited Marine Surveyors, National Association of Marine Surveyors).

CERTIFICATE OF DOCUMENTATION: Each dredge vessel of five net tons or more must hold a valid Certificate of Documentation with a *registry* or *coastwise* endorsement in accordance with reference (d). Questions related to documenting a vessel should be directed to the National Vessel Documentation Center at 800-799-8362. One additional note, barges comprised of flexi-floats or similar will be considered individual vessels for documentation purposes unless they are rigidly connected (i.e.- welded) and not able to be disassembled or rearranged. If your vessel is five net tons or more, you can view fee schedules, documentation instructions, and apply for a certificate of documentation at <http://www.uscg.mil/nvdc>. This certificate must be renewed every year.

STATE REGISTRATION: A self-propelled dredge vessel of less than five net tons may, in lieu of a Certificate of Documentation, be registered with the State of Alaska in accordance with reference (e). In past years, the Coast Guard has discovered several dredges less than five net tons registered in Washington or other states. Note that if the dredge has operated in Alaska for more than 60 days, it must be registered in Alaska, not elsewhere.

INSPECTED DREDGE VESSELS: Self-propelled dredges of 300 gross tons or more, as well as manned, non-self-propelled dredges of any size are required to be inspected. Dredges are considered “manned” if they have personnel onboard for the purposes of operating or navigating the barge, including the operation of dredging equipment. Dredges subject to inspection must adhere to the requirements of reference (f) and maintain a valid Coast Guard Certificate of

Inspection (COI). Owners and operators of vessels requiring a COI should contact Sector Anchorage as soon as possible to discuss inspection plans. Please note that initial inspection is a somewhat lengthy and involved process and dredge operators are encouraged to begin well in advance of their target start date for operations. Dredges which are required to hold a COI shall call Sector Anchorage's Inspection Division in order to start the inspection process. Additionally, dredgers should note that carrying more than six passengers for hire on dredge vessels requires that the vessel be inspected as a passenger vessel. A CG-3752 (application for inspection) must be filed 30 days prior to the date of requested inspection. That application can be found here:

UNINSPECTED DREDGE VESSELS: An uninspected dredge is a vessel that is self-propelled and less than 300 gross tons. With few exceptions, most dredges in Nome fall into this category. Uninspected dredges must adhere to the general commercial vessel safety standards in reference (g) and are not required to hold a COI.

DOCKSIDE EXAMINATIONS: To help operators of uninspected dredge vessels understand and apply uninspected commercial vessel regulations, Coast Guard examiners offer voluntary dockside safety exams in Nome from June to August. Sector Anchorage will post the 2018 schedule on its webpage <http://www.pacificarea.uscg.mil/Our-Organization/District-17/17th-District-Units/Sector> and at the harbor master's office in Nome. Dredge operators may call Mr. Jeff Ahlgren at Sector Anchorage at (907) 428-4183 to schedule an examination appointment. If a dredge does not pass the exam on the first try, the examiner will provide the operator a worklist to complete prior to re-examination. The checklist of requirements to obtain a Coast Guard decal is found in Enclosure (1). Though the Coast Guard considers dockside exams voluntary for uninspected commercial vessels, owner/operators are strongly encouraged to undergo a dockside safety exam. While any vessel has the potential to be boarded by Coast Guard law enforcement personnel, vessels that are inspected or have received a voluntary safety decal from the Coast Guard are less likely to be boarded to verify compliance. Dredgers that successfully complete a gold dredge dockside safety exam will receive a one year decal to document their compliance with applicable regulations.

MERCHANT MARINER CREDENTIALS: A self-propelled dredge vessel of 200 gross tons or more must be operated by a master and chief engineer credentialed in accordance with references (h) and (i), respectively. Manned, non-self-propelled barges are required to hold a COI and manning will be determined on a case-by-case basis during the certification process. Additionally, towing vessels 26 feet or longer must be operated by a master holding a credential in accordance with reference (j). Dredge operators should also be aware that towing vessels over 26 feet are required to be inspected in accordance with reference (k) and should hold a COI in order to tow dredge vessels.

LOAD LINES: Each dredge vessel 79 feet or longer built in 1986 or later (or 150 gross tons or more if built in 1985 or before) must maintain a valid load line certificate in accordance with reference (l). Sector Anchorage will not give blanket equivalencies or exemptions from load line requirements for gold dredges. Individual operators retain the right to request an individual exemption or equivalency as outlined in reference (l). This request should be made in writing to the Sector Anchorage OCMI. These requests will be ultimately decided by our headquarters office in Washington D.C. Vessels which are required to have a load line will not be permitted to operate without one unless a waiver has been granted.

DIVE SAFETY: The Coast Guard strongly encourages gold dredge divers to follow the Occupational Safety and Health Administration (OSHA) regulations in reference (m). These regulations lay out training, operations, equipment, and recordkeeping requirements that improve diver safety and minimize risk. Two divers have died while dredging for gold in Nome (one in 2011 and one in 2014). Both deaths may have been avoided if the OSHA regulations had been followed. The lead investigator in the 2014 diver death drafted a lessons learned document from that incident, which is included as Enclosure (5).

DIVE LIGHTS: In 2015, the Nome gold dredge fleet made excellent progress toward correcting widespread non-compliance with dive light requirements. Displaying a vertical red-white-red array of all-around lights when diving at night or in restricted visibility sends a visual message to other boats in the area warning them to be aware of operations under the surface. The requirement to display lights applies to both commercial and recreational vessels. The Coast Guard has received many questions from individual miners about how to comply with the dive light requirements. Enclosure (3) provides a FAQ and information about standards for miners who have not yet met the requirement.

RULES OF THE ROAD: Dredge vessel operators are responsible for understanding and complying with the navigation rules in reference (n) and all self-propelled vessels greater than 36 feet are required to maintain a hard copy of these rules onboard while operating. Note that in both Nome's harbor and in all offshore dredging areas, International (not Inland) rules apply. Though the two sets of rules are similar, important distinctions exist. The Coast Guard publication "Navigation Rules" displays International and Inland rules side-by-side for comparison: http://www.navcen.uscg.gov/pdf/navRules/CG_NRHB_20141118.pdf.

AUTOMATIC IDENTIFICATION SYSTEM (AIS): New AIS requirements came into effect on March 2, 2015. These requirements had a delayed implementation date of March 1, 2016. Prior to this regulatory change, Nome gold dredges were exempt from AIS carriage requirements. However, the new AIS regulations extend to all commercial vessels of 65 feet or more. This regulation requires that all Nome gold dredges 65 feet or more in length have an AIS Class A device meeting Coast Guard approval series 165.155. These devices must be onboard and operational at all times while underway. Additionally, all towing vessels over 26 feet and 600 horsepower are required to maintain a Class A AIS.

AT-SEA ENFORCEMENT: The Coast Guard may conduct underway boardings on dredge vessels off the coast of Nome to ensure compliance with applicable federal regulations. If violations are identified, fines or voyage termination may result. Dredge vessels with current safety decals may still be boarded, but generally are not targeted as frequently as dredge vessels that do not have decals.

MARINE CASUALTY REPORTING: Operators of federally documented dredge vessels must immediately report certain types of accidents to Sector Anchorage in accordance with reference (o). Failure to report may result in significant fines. Enclosure (2) contains additional information about casualty reporting requirements. State-registered vessels must report deaths and serious injuries to the Coast Guard; they may do so using the same contact information provided in enclosure (2).

DRUG AND ALCOHOL PROGRAM: In accordance with reference (p), a chemical testing program is mandatory on all dredges that hold a COI, as well as uninspected self-propelled dredges over 200 GRT that are required to have a credentialed crewmember onboard. Any personnel with duties relating to the safety of the vessel must be enrolled in the random testing program. Additionally, *all* gold dredges are subject to post-casualty drug and alcohol testing in accordance with reference (o). Marine casualties resulting in damage greater than \$100,000, injury beyond first aid, or the loss of a vessel (inspected vessels or self-propelled vessels over 100 GRT) are considered serious marine incidents and all directly involved individuals are required to receive an alcohol test within two hours and a department of transportation (DOT) drug test within 32 hours. Alcohol tests can be completed using onboard test strips, while drug tests must be completed with a DOT-certified collector. There is a DOT collector on call at the Nome Hospital seven days per week in order to meet this post-casualty testing requirement. Vessel owners can contact Sector Anchorage for questions regarding drug and alcohol program requirements.

POLLUTION REPORTING: Operators must notify the Coast Guard National Response Center if oil or certain other hazardous pollutants enter the ocean, or waters leading to the ocean. This includes pollution spilled on or through the ice during winter dredging, as well as any spills from non-vessels (i.e., bottom crawlers). To report a spill, call 1-800-424-8802.

EMERGENCIES: The Coast Guard Sector Anchorage Command Center operates 24 hours a day, seven days a week, and can be reached by calling 907-428-4100.

FINAL NOTES: Please direct questions or concerns to Mr. Jeff Ahlgren at Sector Anchorage at (907) 428-4183 or by email: Jeffrey.L.Ahlgren@uscg.mil. Sector Anchorage strongly urges the dredging fleet to contact our office *prior* to building or purchasing a dredge, particularly a large dredge, in order to preemptively ensure that the prospective dredge is able to meet all regulatory requirements. If you are considering purchasing/building a dredge, please fill out the application for inspection in enclosure (5). Dredge owners are reminded that a marine surveyor or professional engineer may be a useful tool for navigating the applicable regulations.

#

Enclosures: (1) Gold Dredge Safety Examination Checklist
(2) Marine Casualty Reporting in Western Alaska
(3) Lights and Flags
(4) CG-3752, Application for Inspection of US Vessel
(5) Lessons learned from diving fatality in Nome

Copy: (1) Commander, Seventeenth Coast Guard District (dp)
(2) Alaska Department of Natural Resources

NOME GOLD DREDGE SAFETY EXAMINATION

U.S. Coast Guard Sector Anchorage

Inspections Division: 907-428-4161 • anchorage.inspections@uscg.mil

Command Center: 907-428-4100 • sector.anchorage@uscg.mil

Website: <https://www.uscg.mil/d17/SectorAnchorage/golddredging.asp>



Exam Results

PASS: A Coast Guard examiner has examined this vessel and found that it was in full compliance with applicable vessel safety requirements at the time of the exam. **Issued decal #** _____.

PENDS: This vessel was *not* in full compliance with applicable vessel safety requirements at the time of the exam.

Vessel Particulars

Note: Nome gold dredges require Coast Guard Certificates of Inspection if they are: (a) self-propelled vessels over 300GRT; or (b) manned barges of any size. This form does not apply to these vessels.

Vessel Name:	Official Number or State Number:
AK DNR Mining Permit Number:	Vessel Length:
Vessel Gross Registered Tonnage:	Total HP: Number of engines: <input type="checkbox"/> none; <input type="checkbox"/> single; <input type="checkbox"/> twin
Owner's Name:	<input type="checkbox"/> Gasoline; <input type="checkbox"/> Diesel; <input type="checkbox"/> Other:
Captain's Name:	<input type="checkbox"/> Outboard; <input type="checkbox"/> Inboard; <input type="checkbox"/> Other:
Crew# (max including captain):	Hull type: <input type="checkbox"/> Monohull; <input type="checkbox"/> Catamaran; <input type="checkbox"/> Pontoon (#)
Hull material: <input type="checkbox"/> Steel; <input type="checkbox"/> Aluminum; <input type="checkbox"/> Wood; <input type="checkbox"/> Plastic; <input type="checkbox"/> Other:	

Dockside Exam Details

Date of Exam:	Location of Exam: <input type="checkbox"/> Nome Harbor; <input type="checkbox"/> Belmont Beach
Date(s) of Re-exams:	<input type="checkbox"/> Other:
Vessel Representative's Name:	Previous decal issued: <input type="checkbox"/> No; <input type="checkbox"/> Yes - year:
Vessel Representative's Role: <input type="checkbox"/> Owner; <input type="checkbox"/> Captain; <input type="checkbox"/> Other (specify):	USCG Examiner's Name: USCG Examiner's Phone:
Vessel Representative's Phone:	USCG Examiner's Unit:
Vessel Representative's Email:	

Items Required for Decal

GENERAL	REFERENCE	yes	no	n/a
Certificate of Documentation (COD) with coastwise or registry endorsement: <i>required for vessels of 5 net tons or more • min 4" name both sides of bow • min 4" name and hailing port on stern • min 3" official number on interior structural member</i>	46 CFR Subchapter G			
State Certificate of Number: <i>required if vessel has no Certificate of Documentation • must be AK if used in AK 90+ consecutive days • numbers both sides of bow</i>	33 CFR 173 AS 05.25.055			
Merchant Mariner Credentials: <i>required for master and chief engineer if 200 GRT or larger • original MMCs must be on board</i>	46 CFR 15.805 46 CFR 15.820			
Load Line: <i>required for vessels 79ft+ except for vessels <150GRT built in 1985 or before</i>	46 CFR 42, 44			
NAVIGATION AND COMMUNICATION	REFERENCE	yes	no	n/a
Marine VHF Radio: <i>verify transmission on 16 • if over 65.6ft, must also carry FCC Bridge to Bridge Station License</i>	AK DNR Permit 33 CFR 26.03d			
Navigation Lights: <i>under 23ft with max speed of 7 knots may display an all-around white light and no sidelights • under 39.5ft may combine sidelights into centerline red/green and combine masthead and stern light into all-around (alternative is separate sidelights, stern light, mast light) • 39.5ft up to 164ft need sidelights, stern light, masthead, all-around anchor light) • 164ft or longer need sidelights, stern light, 2 mastheads, 1 all-around anchor light, 1 anchor ball (or 2nd anchor light)</i>	46 CFR 25.10-3 COLREGS Rules 20, 21, 22, 23, 30, Annex I			
Diver Lights and Shapes: <i>for dredges that employ divers • 3 vertically-arranged all-around lights (red-white-red) • rigid International Code Flag A (white and blue)</i>	COLREGS Rule 27(e)			
Automatic Identification System: <i>for self-propelled vessels 65ft or longer • must be Class A</i>	33 CFR 164.46			
Tide Tables: <i>for area of operation (obtain from Harbormaster's Office)</i>	46 CFR 26.03			
Charts: <i>may print NOAA Booklet Chart (Norton Sound - Nome Harbor and Approaches)</i>	46 CFR 26.03			

NAVIGATION AND COMMUNICATION (continued)	REFERENCE	yes	no	n/a
Navigation Rules: <i>Hard copy carried onboard if over 36 ft in length</i>	33 CFR 83.01(g)			
Light List: <i>may print just the two pages relevant to Nome from www.navcen.uscg.gov</i>	46 CFR 26.03			
Coast Pilot 9: <i>may print just "Chart 16206" section of "Bering Sea" Chapter from www.nauticalcharts.noaa.gov</i>	46 CFR 26.03			
Sound Signaling Appliance: <i>hand-held air horn is acceptable for vessels up to 39.4ft • vessels 39.4ft or longer must have an installed whistle</i>	COLREGS Rules 32, 33, Annex III			
Bell: <i>required only for vessels 65.5ft or longer • bell diameter must be min 11.8" (300mm)</i>	COLREGS Rules 32, 33			
Visual Distress Signals: <i>readily accessible • all need 3 red flares (hand-held, rocket and/or parachute) or 1 electric distress light • over 16ft using electric light in lieu of red flares also need orange flag or 3 orange smokes</i>	33 CFR 175 Subpart C			
EPIRB: <i>required if operating more than 3NM from shore • float-free Category 1 • properly registered • battery and release not expired</i>	46 CFR 26-20 46 CFR 26-50			
LIFESAVING	REFERENCE	yes	no	n/a
PFDs (Lifejackets): <i>readily accessible • at least one for each person on board • under 40ft need Type I, II or III • 40ft or longer need Type I • may substitute Type V labeled for commercial use (if worn) or immersion suit • if work-vests are used, store separately</i>	46 CFR 25.25-5 46 CFR 20.25-9 46 CFR 26.30			
PFD Lights: <i>one for each PFD or immersion suit • approved under 161.012</i>	46 CFR 25.25-13			
PFD Retro-reflective Tape: <i>Type I tape each side near shoulders (min 31in² per side)</i>	46 CFR 25.25-15			
Life Ring: <i>required for vessels 26ft or longer • min 20" diameter • immediately available • approved under 160.050</i>	46 CFR 25.25-5 46 CFR 20.25-9			
FIREFIGHTING AND FIRE PREVENTION	REFERENCE	yes	no	n/a
Fire Extinguishers (under 65ft): <i>under 26ft need one B-I • 26ft up to 40ft need two B-I's • 40ft up to 65ft need three B-I's • may substitute one B-II for two B-I's • if at least 26ft, may substitute fixed machinery space extinguishing system for a B-I • no extinguisher required <26ft with outboards and no closed spaces to entrap vapors from fuel tanks</i>	46 CFR 25.30			
Fire Extinguishers (65ft and longer): <i>Add this (under 50GRT need 1 B-II • 50GRT up to 100GRT need 2 B-II's • 100GRT up to 300GRT need 3 B-II's) plus this (add a B-II for each 1000 break HP of main engines, rounding up)</i>	46 CFR 25.30			
Fire Extinguisher Selection & Mounting: <i>must be USCG approved, mounted in bracket</i>	46 CFR 25.30			
Ventilation: <i>for vessels with gasoline engines or generators</i>	46 CFR 25.40-1			
Backfire Flame Control: <i>for non-outboard gasoline motors (including generators)</i>	46 CFR 25.35			
POLLUTION PREVENTION	REFERENCE	yes	no	n/a
Marine Sanitation Device: <i>required if piped toilets installed • under 65ft, Type I, II or III • 65ft or longer, Type II or III • Type III discharge locked closed inside 3NM • types II and III must be properly certificated</i>	33 CFR 159			
Oil Retention: <i>no vessel may pump oily bilge water overboard • fixed machinery space discharge piping and pump required if 100GRT or more with no oily water separator</i>	33 CFR 155.350 33 CFR 155.420			
Oil Pollution Placard: <i>required on vessels 26ft or longer in machinery space or near bilge pump controls</i>	33 CFR 155.450			
Garbage Placard: <i>required for vessels 26ft or longer</i>	46 CFR 25.50			
Garbage Management Plan: <i>required for vessels 40ft or longer operating beyond 3NM from shore • write down how to collect, store and discharge garbage, plus who is responsible</i>	33 CFR 151.57			

Special Notes / Deficiencies Identified

Deficiencies Identified:

Discussion Items

Marine casualty reporting requirements	Exhaust (distanced from diver's air intake)
Post-casualty alcohol and drug (DOT) testing	Diver training and communication
Use of navigation lights (when running/anchored/diving)	Boating and diver safety education courses
PFD wear and man-overboard drowning	Navigation rules (book not required, be familiar with rules)
Pollution reporting (NRC 1-800-424-8802)	Bilge pumps and alarms
Housekeeping (reduce fire risk and slip/trip/fall risks)	First aid training and kits (prep for hypothermia)
Heating and cooking systems (fire/explosion danger)	Float plan/emergency contact ashore
Drills (fire, man-overboard, abandon ship)	Anchor with line/chain ready for use

USCG Use Only: MISLE Entry Complete/ Activity #:

Enclosure (1) to Sector Anchorage Gold Dredge Safety Handout

COAST GUARD MARINE CASUALTY REPORTING

In the Arctic and in Western Alaska (west of 148°26')

Sector Anchorage Command Center

24/7 via radio or phone

phone: 907-428-4100

fax: 907-428-4114

sector.anchorage@uscg.mil

The events described in 46 CFR 4.05 (see page 2) are *Reportable Marine Casualties*. Commercial vessel operators have two reporting responsibilities:

1. Call Sector Anchorage's Command Center **immediately** via radio, sat phone or cell phone to make an initial verbal report. *Note: Immediate reporting is not just for situations in which life or property is in danger; it is required for any incident described in 46 CFR 4.05. If you are unsure about whether or not an event meets the definition, call and ask to discuss the situation with an Investigating Officer.*
2. Complete form CG-2692 and turn it in within **five days** of the accident. Captains can email or fax the form to Sector Anchorage's Command Center, or mail or hand deliver a hard copy to: Sector Anchorage; Marine Safety Detachment Dutch Harbor; Marine Safety Detachment Kodiak; or Marine Safety Detachment Homer.

Some *Reportable Marine Casualties* require follow-up chemical testing. These are *Serious Marine Incidents* (see page 2 for definition). These events require alcohol testing (within 2 hours unless safety concerns delay to within 8 hours) and DOT drug testing (within 32 hours). Not everyone needs to be tested in every event; it is the marine employer's responsibility to determine which crewmembers were directly involved in the incident. Report drug and alcohol testing to the Coast Guard within five days of the accident using form CG-2692b. If drug test results are not available within five days, turn the CG-2692b in and send results later.

Per Coast Guard policy, those involved in *Serious Marine Incidents* should also complete 96-hour work/rest history forms (available at <http://www.uscg.mil/d17/SectorAnchorage/>).

Reportable Marine Casualty

46 CFR 4.05-1 Notice of marine casualty.

(d) Immediately after the addressing of resultant safety concerns, the owner, agent, master, operator, or person in charge, shall notify the nearest Sector Office, Marine Inspection Office or Coast Guard Group Office whenever a vessel is involved in a marine casualty consisting in—

- An unintended **grounding**, or an unintended strike of (allison with) a **bridge**;
- An intended grounding, or an intended strike of a bridge, that creates a hazard to navigation, the environment, or the safety of a vessel, or that meets any criterion of paragraphs (a) (3) through (8);
- A loss of main propulsion, primary steering, or any associated component or control system that reduces the **maneuverability** of the vessel;
- An occurrence materially and adversely affecting the vessel's **seaworthiness** or fitness for service or route, including but not limited to fire, flooding, or failure of or damage to fixed fire-extinguishing systems, lifesaving equipment, auxiliary power-generating equipment, or bilge-pumping systems;
- A **loss of life**;
- An **injury** that requires professional medical treatment (treatment beyond first aid) and, if the person is engaged or employed on board a vessel in commercial service, that renders the individual unfit to perform his or her routine duties; or
- An occurrence causing property-damage in excess of **\$25,000**, this damage including the cost of labor and material to restore the property to its condition before the occurrence, but not including the cost of salvage, cleaning, gas-freeing, drydocking, or demurrage.
- An occurrence involving significant **harm to the environment** as defined in § 4.03-65.

(e) Notice given as required by 33 CFR 160.215 satisfies the requirement of this section if the marine casualty involves a hazardous condition as defined by 33 CFR 160.204.

(f) Except as otherwise required under this subpart, if the marine casualty exclusively involves an occurrence or occurrences described by paragraph (a)(8) of this section, a report made pursuant to 33 CFR 153.203, CFR 117.21, or 40 CFR 302.6 satisfies the immediate notification requirement of this section.

Fines for failure to report immediately or in writing can be as high as \$35,000 per offense

Serious Marine Incident

46 CFR 4.03-2 Serious marine incident.

The term serious marine incident includes the following events involving a vessel in commercial service:

- (d) Any marine casualty or accident as defined in § 4.03-1 which is required by § 4.05-1 to be reported to the Coast Guard and which results in any of the following:
 - One or more **deaths**;
 - An **injury** to a crewmember, passenger, or other person which requires professional medical treatment beyond first aid, and, in the case of a person employed on board a vessel in commercial service, which renders the individual unfit to perform routine vessel duties;
 - Damage to property, as defined in § 4.05-1(a)(7) of this part, in excess of **\$100,000**;
 - Actual or constructive **total loss** of any vessel subject to inspection under 46 U.S.C. 3301; or
 - Actual or constructive **total loss** of any self-propelled vessel, not subject to inspection under 46 U.S.C. 3301, of 100 gross tons or more.
- (e) A discharge of oil of **10,000 gallons** or more into the navigable waters of the United States, as defined in 33 U.S.C. 1321, whether or not resulting from a marine casualty.
- (c) A discharge of a reportable quantity of a **hazardous substance** into the navigable waters of the United States, or a release of a reportable quantity of a hazardous substance into the environment of the United States, whether or not resulting from a marine casualty.

The fine for failure to conduct testing can be as high as \$7000

Dive Lights/Flag for Nome Gold Dredge Divers

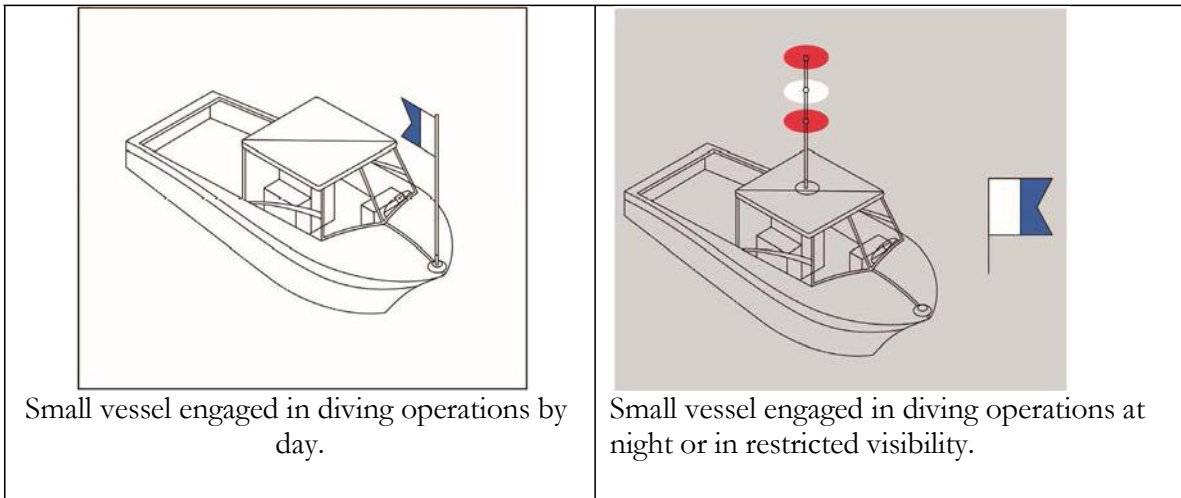
Navigation Rules

—INTERNATIONAL—

Lights and Shapes

Rule 27—CONTINUED

- (e) Whenever the size of a vessel engaged in diving operations makes it impracticable to exhibit all lights and shapes prescribed in paragraph (d) of this Rule, the following shall be exhibited:
- (i) three all-round lights in a vertical line where they can best be seen. The highest and lowest of these lights shall be red and the middle light shall be white;
 - (ii) a rigid replica of the International Code flag “A” not less than 1 meter in height. Measures shall be taken to ensure its all-round visibility.



—INTERNATIONAL—

Annex I—CONTINUED

- (i) When the Rules prescribe two or three lights to be carried in a vertical line, they shall be spaced as follows:
- (i) On a vessel of **20 meters in length or more** such lights shall be spaced not less than **2 meters apart**, and the lowest of these lights shall, except where a towing light is required, be placed at a height of not less than **4 meters above the hull**;
 - (ii) On a vessel of **less than 20 meters in length** such lights shall be spaced not less than **1 meter apart** and the lowest of these lights shall, except where a towing light is required, be placed at a height of **not less than 2 meters above the gunwale**;
 - (iii) When three lights are carried they shall be equally spaced.



20 meters = 65ft 7in
 4 meters = 13ft 1in
 2 meters = 6ft 7in
 1 meter = 3ft 3in

From the Alaska Boater's Handbook

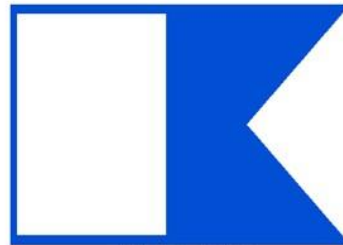
Diving

Diving has become a very popular activity in Alaska. Boat operators need to be aware of divers in the water and be able to recognize diving flags.

- Alaska law recognizes that a red flag with a white diagonal stripe (a “diver’s flag”) indicates a person is engaged in diving in the immediate area. Displaying the diver’s flag is not required by law and does not in itself restrict the use of the water.
- International Navigation Rules also require a blue and white “Alpha” flag be displayed on boats engaged in diving operations.
- When operating in an area where a diving flag is displayed, boaters must stay at least 100 feet away from the flag unless they are operating at no-wake speed.



Diver Down Flag



Alpha Flag

Frequently Asked Questions on Lights and Flags

The Coast Guard has witnessed an admirable degree of ingenuity from miners in Nome working to comply with the navigation and dive light requirement. Here are some common questions.

Q: Can I use household light bulbs for my lights?

A: No. Lights designed for household or automotive use are inadequate – they are not suitable for the marine environment and not proven to meet color and intensity requirements. You must use navigation lights that meet American Boat & Yacht Council (ABYC) standard A-16 or Underwriters Laboratories standard UL 1104. Look for the letters “ABYC” or “UL” on the light-bulb packaging. More information on lights is available at <http://alaska.coastguard.dodlive.mil/2015/11/the-safety-of-navigation-lights/>.

Q: Can I use a red Sharpie to turn a white light into a red light?

A: No. Red tape and red cellophane are not acceptable either. The red colored lens is an integral part of the light’s approval and suitability for marine service. Red all-around lights are more difficult to find than white all-around lights, but they can be purchased from many different marine suppliers.

Q: What is an all-around light?

A: An all-around light has a 360-degree arc, which means it is visible from all sides. Some navigation lights have smaller arcs, such as the 225-degree masthead light, 112.5-degree sidelight, and 135-degree stern light.

Q: Can I use a 2-by-4 as a mast for my lights?

A: Your dive lights must have a 360-degree arc. If you use a 2-by-4 for a mast and mount lights too close to the mast, the 2-by-4 can block part of the visible arc. Though not ideal, a 2-by-4 can be used if lights are offset far enough from the mast that it blocks only a small fraction of the arc.

Q: Do I really have to have three feet of space between each of the three lights? That’s six feet between the top and bottom light!

A: The spacing allows the light arrangement to be seen clearly at a distance. Coast Guard examiners might not use a tape measure to check spacing, but they do expect you try to meet distance requirements. Examiners understand a tall mast can be impractical on a very small vessel.

Q: I have a unique idea for how to build my dive light mast. Can I check with someone to make sure it will meet Coast Guard standards?

A: If you are not sure whether your idea for dive lights meets the requirements, you may call Sector Anchorage at (907) 428-4183 to discuss your plan before you purchase materials and invest the labor.

Q: Do the lights need to be turned on all the time?

A: No. You should only display dive lights when diving at night or in conditions of restricted visibility (fog or rain). Turn dive lights off and running lights on when moving the vessel to and from the dive site.

Q: I have a red and white flag. Do I need a blue and white flag too?

A: Yes. The blue and white alpha flag is required, even if you already have a red and white flag.

Q: Can I make my own alpha flag?

A: Yes. Painting both sides of a board, for example, is an acceptable alpha flag.

APPLICATION FOR INSPECTION OF U.S. VESSEL

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number.

The Coast Guard estimates that the average burden for this report is 15 mins. You may submit any comments concerning the accuracy of this burden estimate or any suggestion reducing the burden to: Commandant (G-MOC), U.S. Coast Guard, Washington, DC 20593-0001 or Office of Management and Budget, Paperwork Reduction Project (1625-0002), Washington, DC 20503.

TO: Officer in Charge, Marine Inspection

Marine Inspection Zone _____

The undersigned applies to have the Steam Vessel Motor Vessel

Motorboat Barge Other (Indicate) _____

named _____ Official or Award No. _____

inspected under the laws of the United States; to be employed as a Passenger Vessel (No. of Passengers _____)

Cargo Vessel Tank Vessel MODU Other (Indicate) _____

on the following route: (Waters, Geographical limits) _____

Liquid cargo in bulk will will not be carried as follows:

Flammable or Combustible (Indicate grade) _____

Chemicals (Indicate) _____

Length of vessel _____ ft.

Hull material: Steel Other (Indicate) _____

Vessel will be at (Port, Pier, etc.) _____

The current Certificate of Inspection expires on _____

Inspection is desired on _____

Cargo Ship Safety Construction Certificate to be issued by ABS USCG.

Vessel is is not to be classed.

If classed, indicate Classification Society: ABS Other (Indicate) _____

I CERTIFY that previous application for this inspection has has not been made. I further certify that I have instructed the master to present the vessel ready in all respects for the above requested inspection on the date specified. I understand that if this inspection is to be conducted at foreign port or place the vessel owners will be billed for the costs incurred in accordance with 46 USC 385b-1.

(Signature) _____

(Title) _____

Address to reply to:

TELEPHONE NUMBER:

DATE:



UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY LESSONS LEARNED

Sector Anchorage

May, 2017
Anchorage, AK

Diver Safety on Gold Dredge Vessels

Purpose: The U.S. Coast Guard issues lessons learned to raise awareness of conditions and/or actions that have been identified as being causal factors in marine casualties, and that it believes can be best addressed by the maritime industry and/or the general public.

The Incident: In August 2014, a commercial diver was mining from a gold dredge vessel off Nome, Alaska. An unknown underwater event caused the diver to jettison his dive harness and weight belt. The diver was unconscious when he was spotted floating on the surface. The State Medical Examiner determined the cause of death to be from drowning.

Contributing Factors and Analysis: The investigation identified the lack of crew experience in commercial diving and specifically gold dredging operations. A crew of two is too small to support operations. There were no written or verbal policies for equipment inspections, operations, or emergencies. The condition of the air supply hose was not ruled out as a contributing factor. The surface to diver communications were inoperable. The tender was not actively monitoring the submerged diver. Diving conditions on the day of the incident were far from optimal. These facts contributed to the incident, and when combined, led to an elevated diver risk that were not adequately addressed.

Lessons Learned: Coast Guard investigators have identified the following options for an owner/operator of similar vessels in similar service to mitigate the risks associated with the above identified contributing factors:

- All dredges with divers should operate with a properly trained, minimum crew of three.
- Crew should utilize a risk analysis and conduct equipment inspections prior to every dive.
- Divers should carry a back-up air supply in the event of a primary air supply failure.
- Tenders should have no responsibility other than communicating and tending to the diver.
- All dredges with divers should utilize a surface to diver communication unit.
- Employers should develop a safe practices manual and make available to each dive team member, specifically defining crew position roles and responsibilities.
- Employers and divers should follow the Occupational Safety and Health Standards for Commercial Diving (29CFR1910 § 401-440) as much as practicable to the unique Nome gold dredging operations.

Closing: These lessons learned are provided for informational purpose only and do not relieve any domestic or international safety, operational, or material requirements. This document was developed by the Sector Anchorage Investigations Division. Questions or comments may be sent to WesternAlaskaIO@uscg.mil.