U.S. Department of Homeland Security
United States Coast Guard

Commandant
United States Coast Guard

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NVIC 03-23
16 Nov 2023

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 03-23

Subj: GUIDANCE ON NAVIGATIONAL SAFETY IN AND AROUND OFFSHORE RENEWABLE ENERGY INSTALLATIONS (OREI)

Ref: (a) Title 46, U.S. Code, Chapter 700 Ports and Waterways Safety
(b) Title 29, U.S. Code, Chapter 29 Outer Continental Shelf Lands (OCSLA)
(c) Title 33, Code of Federal Regulations, Part 147, Safety Zones
(d) Safety of Life at Sea (SOLAS) V Regulation 34 "Voyage Planning."
(e) Navigation and Vessel Inspection Circular (NVIC) 01-23: Guidance on the Coast Guard's Roles and Responsibilities for Offshore Renewable Energy Installations on the Outer Continental Shelf
(f) U.S. Chart No. 1, Symbols, Abbreviations and Terms used on Paper and Electronic Navigational Charts
(g) The National Academies of Science, Engineering and Medicine, Consensus Study Report on Wind Turbine Generator Impacts on Marine Vessel Radar, 2022

1. PURPOSE.

a. This Navigation and Vessel Inspection Circular (NVIC) highlights considerations when planning and undertaking voyages in the vicinity of offshore renewable energy installations (OREIs) in U.S. waters. Mariners should review and consider the contents of this NVIC prior to navigating within or in the vicinity of an OREI. For this document, the term 'mariner' is used to include masters, officers, crew, skippers and recreational users on all vessel types and personal watercraft.

This NVIC assists mariners making informed risk assessments for their intended voyage. The information provided in this NVIC should be considered together with the guidance on voyage planning and safe navigation found in the references. OREI structures are a new development on the Outer Continental Shelf (OCS). This guidance is general in nature based on information available to date; details of individual sites may vary.

b. Important Maritime Safety Information (MSI) relating to OREIs is distributed by Local or Broadcast Notices to Mariners (LNM or BNM) promulgated by Coast Guard Districts. Mariners may subscribe to receive these notices via email by visiting the USCG Navigation Center website (https://www.navcen.uscg.gov/broadcast-notice-to-mariners). Marine Safety Information Bulletins (MSIB) released by the local Captain of the Port (COTP) may be issued to provide supplemental information.

2. BACKGROUND.

a. Coast Guard Authority and Role: Reference (a) authorizes the Secretary of Homeland Security to take certain actions to advance port, harbor, and coastal facility safety and security. Specifically, 46 U.S.C. 70003 authorizes the Secretary to establish fairways and traffic separations schemes (TSS) to provide safe access routes for the movement of vessel traffic proceeding to or from ports or places subject to the jurisdiction of the United States. The Secretary has delegated this authority to the Commandant of the Coast Guard (Department of Homeland Security (DHS) Delegation 00170.1, Revision No. 01.3, paragraph (II)(70)). The Coast Guard must perform Port Access Route Studies and take into consideration other waterway uses before making such designations.

b. Reference (b) provides the Coast Guard the authority to promulgate and enforce regulations with respect to lights and other warning devices, safety equipment, and other matters relating to the promotion of safety of life and property, to include safety zones, on artificial islands and installations on the OCS.

c. Reference (c) has been amended for consistency with an amendment to OCSLA that added OREI to the definition of OCSLA facilities. These amendments reflect the Coast Guard's authority to establish safety zones around all OCS facilities including renewable energy installations. The purpose of this authority is to provide safe space around these facilities during periods of construction, major maintenance, and decommissioning. Consistent with international law, safety zones established under 33 CFR 147 will not exceed 500 meters around the location of the installation to include its appurtenances and attending vessels. Larger safety zones may still be established within the U.S. territorial sea under 33 CFR 165, subpart C.

d. The number of OREIs in U.S. waters is increasing. As of the summer of 2023, 34 leases have been issued for renewable energy development, with most being wind farms, though tidal and wave energy installations are also being developed. OREIs will be established in close proximity to shipping routes.

Wind farms in planning and development range from small to large, some approaching hundreds of square nautical miles. The sites may be irregular in shape and adjacent developments can share borders. In addition, research projects, including floating turbines, may be established as isolated units.

Wave and tidal energy devices are currently sited where wave or tidal stream conditions are optimum. These are sited to minimize interference with other marine activities as far as practicable.

3. WIND FARMS.

a. Visibility and appearance. Wind farms are readily identifiable both visually and by radar from a considerable distance in good meteorological conditions. The wind turbine generators (WTG) typically comprise a fixed or a floating foundation with a yellow transition piece typically not less than 50 feet high as measured above the Highest Astronomical Tide (HAT) level. Above the transition piece is a platform that forms the

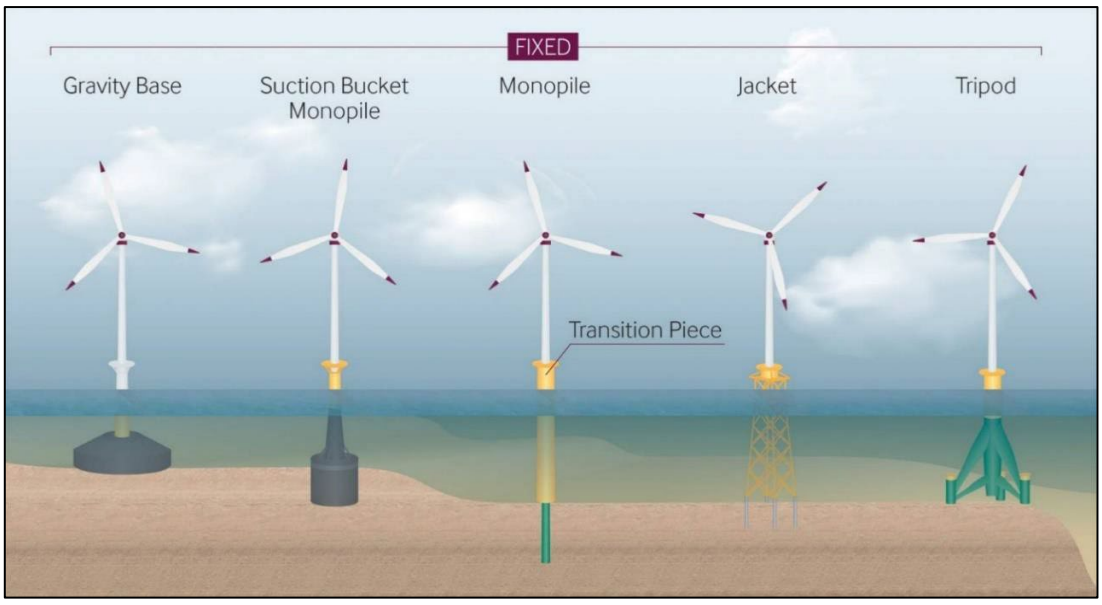
base of the turbine tower. At the top of the turbine tower is the nacelle, a box shaped structure housing the generator. The turbine blades are located opposite the nacelle. The structures above the yellow transition piece section are usually painted matte grey. Blades can be more than 300 feet in length. The following table shows the theoretical visibility range of a wind turbine blade tip and nacelle from the perspective of different sea users in ideal conditions of visibility.

User	Height of Eye	Nacelle Height	Blade Tip	Visibility
Small Craft	6 ft	500 ft		28 NM
Small Craft	6 ft		850 ft	34 NM
Coastal Tanker in Ballast	100 ft	500 ft		34 NM
Coastal Tanker in Ballast	100 ft		850 ft	40 NM

Theoretical visibility table

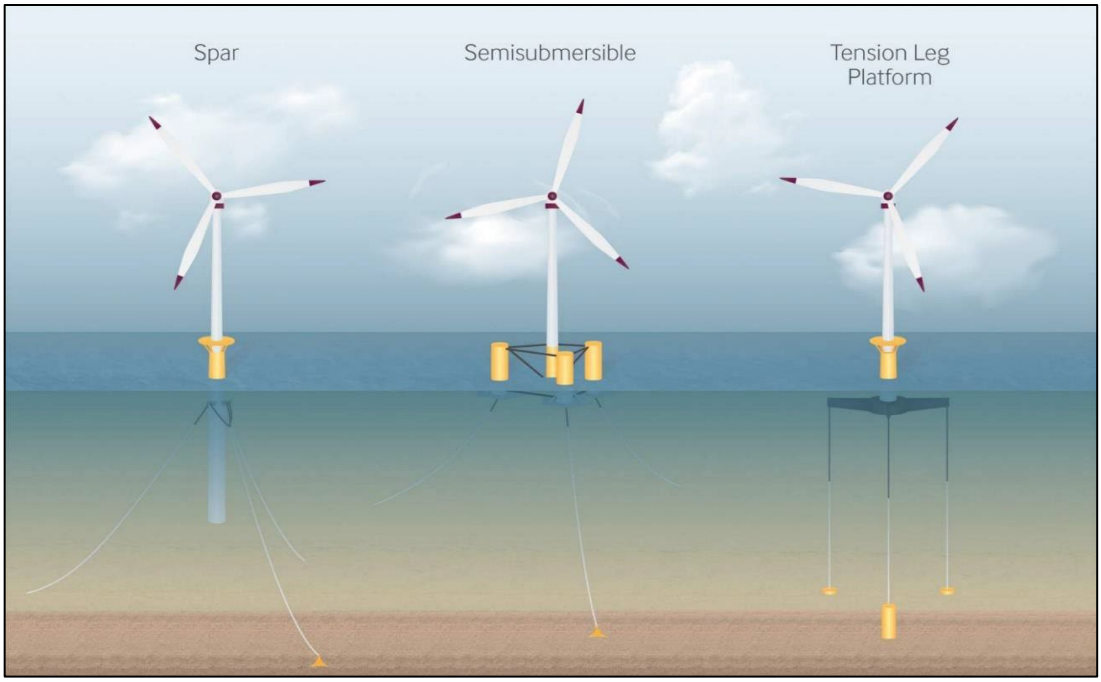
b. Foundations.

(1) *Fixed foundations* are generally found in water depths of less than 200 feet and are secured to the seabed using one of several available types of foundation (see graphic below) depending on the characteristics of the seabed and water depth. Scour protection may be added to the base of the foundation. Above the sea surface they appear as a single structure, which connect to the foundation or a jacket structure below the surface which has three or four legs.



Examples of fixed turbines and foundations

(2) *Floating foundation* turbines will eventually be found in water depths of more than 170 feet. These WTGs consist of either a semi-submersible spar or platform supporting one or more generators which are secured to the seabed using mooring lines/chains and anchors. The types of mooring systems depend on water depth, seabed conditions and foundation infrastructure, however the main types are catenary, semi-taut and taut.



Examples of floating turbines and foundations

c. Navigational Aids: Wind farms are marked and permitted as private aids to navigation (PATON) to be conspicuous by day and night with consideration given to prevailing conditions of visibility and vessel traffic.

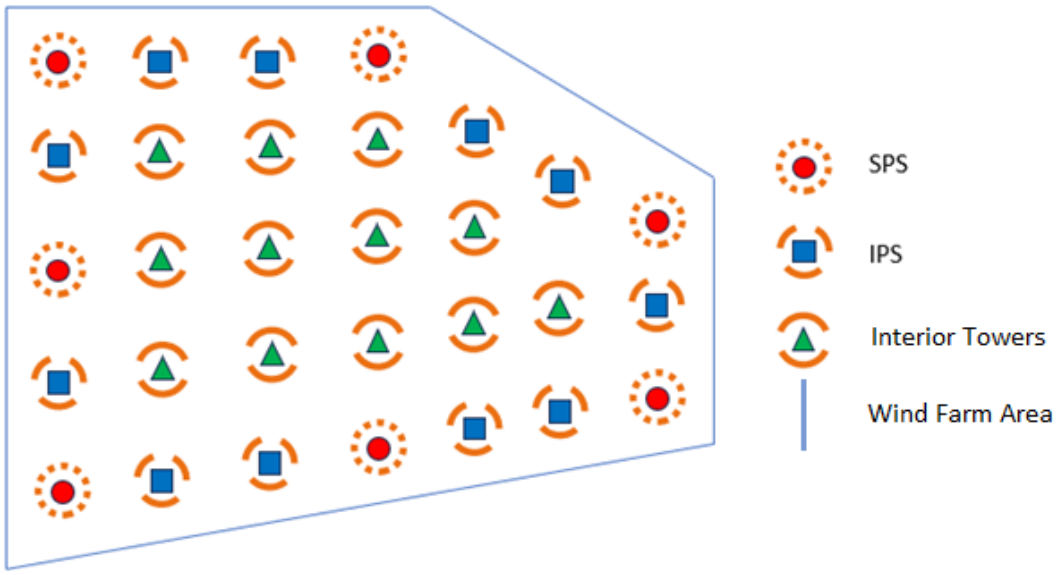
A corner structure, or other significant point on the boundary of the wind farm, is called a Significant Peripheral Structure (SPS). The SPS will be marked with lights visible from all directions in the horizontal plane. These lights should be synchronized to display simultaneously an IALA "special mark" characteristic, quick flashing yellow, with a range of not less than five (5) nautical miles. Aids to navigation on individual structures are placed below the arc of the rotor blades, typically near the top of the yellow section.

At a minimum, each SPS will show the characteristics of a quick flashing yellow light (QY, 0.3s on/0.7s off) that is visible at least 5NM and synchronized with all other SPS lights. In the case of a large or extended wind farm, the distance between SPSs should not normally exceed three (3) nautical miles.

Intermediate peripheral structures (IPS) on the boundary of a wind farm between SPSs may be marked with a 2.5 second flashing yellow light (FL Y 2.5s, 1.0s on/1.5s off) visible from all directions horizontally, with a range of not less than three (3) nautical

miles and synchronized with all other IPS lights. The characteristics of the lights and marks may be shown on the nautical chart.

When present, wind turbine structures interior of a boundary created by SPS and IPS may be marked with 6, 10 or 15-second flashing yellow lights with a range of 1or 2 nautical miles.



Structure	Light Characteristic	Light Range
SPS	Quick Flashing Yellow	5 NM
IPS	Flashing 2.5 Seconds Yellow	3 NM
Interior Towers	Flashing 6, 10 or 15 Sec. Yellow	2 NM

Typical lighting of SPS, IPS and Interior Towers

NOTE: Temporary short range (5 NM) flashing yellow lights may be installed during construction.

d. Identification and signals.

(1) *AIS*. AIS-ATON signals indicate each SPS, and, when a windfarm borders a fairway or has a designated vessel route, that lane may be marked with additional AIS signals. IPS or other Installation, Facility or Structure (IFS) within the farm may also be marked with AIS signals.

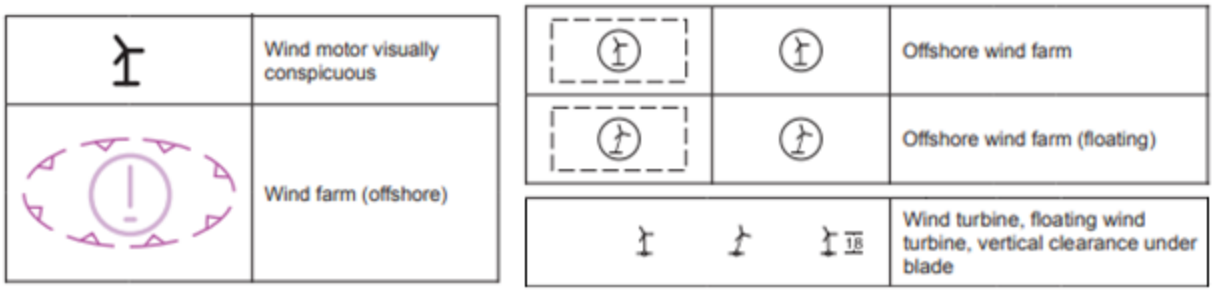
(2) *Sound signals*. In addition to its marking, each SPS may be fitted with the following: sound signal that produces a 4s blast every 30s with rated range of 2NM when the visibility is less than 5NM or when activated by keying marine VHF-FM Channel 1083 (157.175 MHz, previously 83A) five times within ten seconds—Mariner Radio Activated Sound Signal (MRASS).

(3) *Markings*. Individual WTGs will be marked with a unique alphanumeric identifier approximately 9 ft in height, above the platform for visibility in good conditions. Smaller labeling may be visible below the platform. Mariners are advised to become aware of individual OREI features found in areas where they navigate, including OREI lighting, marking and signals.

(4) *Aviation lights*. Red aviation lights on the tops of the nacelles may be visible to surface craft and care must be taken not to confuse these with vessels' sidelights or marine navigational aids.

e. Charting.

(1) *Wind farms* off the U.S. coast, including those under construction, will be charted by the U.S. Hydrographic Office[1] either by a group of black wind turbine chart symbols on larger scale charts, or an outer limit with an encircled black wind turbine symbol on smaller scale charts. The outer limit on all scales will be a black dashed line, or a magenta T-shaped dashed line if there are navigational or other restrictions in the area (this may be supplemented by a 3mm stipple band of the appropriate color); see reference (f). The anchor spread of moorings at floating wind farm sites are charted on the smaller scaled charts.



Standard charting symbology for wind turbines and wind farms

Note: Offshore Substations (OSS) may be marked as offshore platforms.

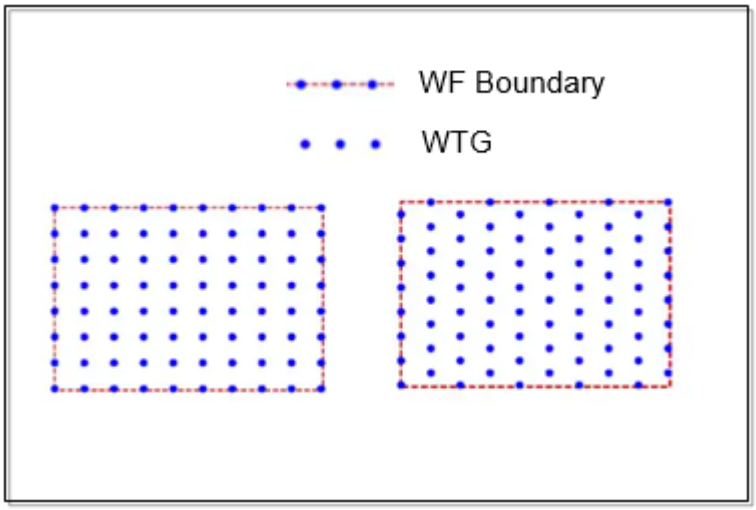
See NOAA Chart No. 1 for charting symbology.
https://nauticalcharts.noaa.gov/publications/docs/us-chart-1/ChartNo1.pdf

f. Submarine cables. Cables or cable areas associated with OREI will generally be charted depending upon the scale of the chart. As with all submarine cables, mariners should note

[1] U.S. Chart No. 1. Department of Commerce National Oceanic and Atmospheric Administration Department of Defense National Geospatial-Intelligence Agency, 2019. Found at Chart No 1.

the hazards associated with anchoring or trawling near them. Heed should also be taken of any additional chart notes relating to OREI.

g. Spacing. WTGs and other towers within a wind farm are spaced in a uniformed grid pattern with at least two lines of orientation.



Sample layouts illustrating two lines of orientation in a grid pattern

h. Seabed characteristics. Wind farm structures could, over time, affect the water depth in their vicinity. In dynamic seabed areas with strong tidal streams, changes in the scouring of the seabed may occur. This may result in water depth information being unreliable. Some wind turbines have scour protection in the form of rocks and/or concrete mattresses placed around their base. Mariners should note the hazards associated with anchoring or trawling near them.

i. Tidal streams. WTGs may affect tidal streams locally, creating eddies nearby. Mariners should be aware of the likelihood of such eddies, likely to only be significant very close to the structures.

j. Vessels. Smaller high-speed vessels (e.g. Crew Transfer Vessels (CTV)) or larger vessels involved in construction and maintenance (e.g. jack-up vessels, crane barges and Service Operations Vessels) may be encountered within or around OREI. Higher traffic densities of windfarm-employed vessels can be expected during construction. CTVs may travel to and from turbines daily. Alternately, floating turbines may be towed to/from ports during construction and for major maintenance. Fishing vessels and recreational small craft may also be operating in the area.

Mariners should be alert to the likely presence of such vessels and be aware that the structures may occasionally obscure them, particularly at night. Large vessels may also become obscured, for example if they are on the opposite side of a wind farm miles away. Smaller and low-profile vessels, and unmanned survey drones, are becoming more prevalent inside the wind farm boundary and along the export cable route. Mariners should be aware and alert for the presence of such vessels. In compliance with Rule 5 of

the International Regulations for Preventing Collisions at Sea (COLREGS), a proper lookout should be always maintained by all available means, as required.

k. Aids to Navigation onshore. In near-shore coastal areas "shore aids to navigation" may become obscured by wind farm structures.

l. Offshore Substation. In larger wind farms offshore substation (OSS) platforms may be present. These are of similar appearance to offshore petroleum production platforms. Submarine cables link WTGs to these stations. Export cables run from the OSS to the shoreside station. Whether all submarine cables are charted depends upon the scale of the nautical chart; in some cases, only the export cable may be shown. All vessels operating within a wind farm should therefore avoid anchoring except in emergencies as the anchor could become fouled.

m. Degrees of motion of Floating Turbines. Floating infrastructure, whether wind turbines or wave or tidal energy devices, will move on their moorings according to ocean conditions and type of equipment. Mariners should give due consideration for the degrees of motion (pitch, roll, yaw, heave, surge, and sway) when in proximity to these structures. Factors such as air clearance of the blades and under-keel clearance of submerged cables may be hazardous if not accounted for.

n. Impacts to Routing and Navigation Safety. In planning a voyage mariners must assess all hazards and associated risks. The proximity of OREI, surface or sub-surface, should be included in this assessment. Mariners are advised to consider that emergency response methods may be affected by the location and orientation of OREI. It's important to acknowledge that waterways that were once unobstructed may now be more constricted. As a result, it's crucial for users to be mindful of this and plan accordingly to avoid potential vessel interactions using all available means. Mariners are also advised that maintenance and operations vessels present within the area may render assistance when necessary.

o. Effects on Navigation and Radar. The National Academies of Sciences, Engineering and Medicine published a consensus study on Wind Turbine Generator Impacts to Marine Vessel Radar. The study concludes "Wind turbines in the maritime environment affect marine vessel radar in a situation-dependent manner," but further concludes, "Opportunities exist to mitigate wind turbine generator-induced interference on marine vessel radar." Mariners are encouraged to review this report, reference (g).

Interfering echoes may appear, and radar antennae sited unfavorably in relation to items of the ship's structure can increase the distortion from these effects. Mariners can carefully adjust radar controls in efforts to suppress some of these spurious radar returns but are warned of a consequent risk of losing targets with a small radar cross section. This may include buoys or small vessels; due care should be taken in making such adjustments.

If these interfering echoes develop, the requirements of the COLREGS Rule 6 Safe speed are particularly applicable and must be observed with due regard to the prevailing circumstance.

There is some indication that solid-state radar technology may decrease the impact of this interference. Considerations by owners and operators may include the use of solid-state technology in radar equipment.

p. WTG rotor effects. WTGs in U.S. waters are required by the lead agency, BOEM, to have the lowest point of the rotor sweep at least 75 feet above Highest Astronomical Tide (HAT). Vessels with a greater air draft should be aware of rotor sweep height and take appropriate care.

Mariners, particularly small boat operators should be aware of the wind reduction and resulting "fill in" behind WTGs. By day, the normal visual clues should be noted. Extra care should be taken at night when visual clues are not so easily detected.

4. OTHER TYPES OF OREI.

a. Wave Energy Convertors. Wave energy convertors (WEC) capture kinetic energy carried by waves and are likely to be located at or near the surface from an attachment or mooring point on the seabed. WEC may be visible or semi-submerged and will create navigation safety challenges yet to be studied at length.

b. Tidal Energy Convertors. Tidal energy convertors (TEC) capture potential energy from the movement of large bodies of water as the tides ebb and flow. TEC may be surface or sub-surface structures incorporating a generator fixed or moored to the seabed. Power take-off is normally via cables to an electrical terminal. TEC may be visible or semi-submerged and will create navigation safety challenges yet to be studied at length.

Visibility of WEC and TEC devices depends on the device type. Typically, these devices are low freeboard, floating structures moored to the seabed. Some installations are totally submerged while others may only protrude slightly above the sea surface.

c. Marking TECs, WECs (other OREI). Marking of these OREIs will conform to IALA Guideline G1162 on the Marking of Offshore Man-made Structures. WEC and TEC will be marked as a single unit or as a block or field as follows:

- When structures are fixed to the seabed and extend above the surface, they should be marked like WTGs within a wind farm.

- Areas containing surface or sub-surface WEC or TEC should be marked by appropriate aids to navigation surrounding the device field as determined by the District Commander. Lighting characteristics for the aids should have the appropriate nominal range and vertical separation as wind farm SPS and IPS and should be synchronized. In addition, radar reflectors, retro-reflecting material, and AIS transponders may be fitted as the level of traffic and degree of risk requires.

- In the case of a large or extended energy extraction field, the distance between Aids to Navigation that mark the boundary should not normally exceed three nautical miles.

- A single wave and/or tidal energy extraction structure, standing alone, that extends above the surface should be marked as an Isolated Danger.

- If a single wave and/or tidal energy device is not visible above the surface but is a hazard to surface navigation, it should be marked by a special mark yellow buoy with flashing yellow light with a range of not less than 5 nautical miles. It should also be noted that many tidal devices have fast-moving sub-surface elements such as whirling blades. It is recommended mariners steer clear.

5. MISCELLANEOUS CONSIDERATIONS.

   a. Safety Zones**.** The U.S. Coast Guard has the authority in 33 CFR 147 to establish safety zones around OCS facilities including renewable energy installations. The purpose of this authority is to provide safe space around these facilities during periods of construction, major maintenance, and decommissioning. Safety zones will not exceed 500 meters around the location of the installation to include its appurtenances and attending vessels.

   OCS facility safety zones are designated by the appropriate District Commander. Notice will be promulgated by LNM and BNM, Federal Register, and MSIB. Safety Zones may be monitored by support craft, including fishing vessels, employed by developers as safety vessels or by developers' marine coordination centers.

   Access to OREI Infrastructure: Mariners are advised that there is no right of access to any type of OREI device. They are private property and appropriate warning signs may be displayed.

   b. Emergencies**.** Mariners should notify the USCG if a vessel experiences engine or steering failure in or near an OREI. They should report their position information and note the real-time location of Service Operation Vessels (SOV) for additional assistance.

6. ACTION. Mariners planning to navigate in and around OREI are encouraged to refer to this NVIC to better understand the increased complexity and potential hazards associated within or around an OREI. Mariners should be aware of active safety zone requirements, Notice to Mariners, and nautical chart notes to comply with any restrictions that apply to the vicinity of an OREI.

   After reviewing this guidance there are, in simple terms, three options for mariners:

   1. Navigate with caution in or through the OREI,
   2. Navigate around the edge of the OREI, or
   3. Avoid the OREI area completely.

   The choice to avoid operations in and around OREI may not be available in some situations. Careful voyage planning will be influenced by several factors including: whether wind turbine generators (WTGs), WEC, or TEC are on fixed or floating foundations; waterway characteristics including water depth, vessel characteristics (type, length, tonnage, draft, maneuverability, etc.), weather and sea conditions. This NVIC does not provide guidance on a

safe distance at which to pass an OREI. Where there is sufficient sea room, it may be prudent to avoid the area completely. When choosing to navigate around or through the OREI, mariners should review nautical charts of the area and keep a close look out for hazards mentioned in this document.

DIRECTIVES AFFECTED. None.

DISCUSSION. BOEM may require the OREI to include mitigations, as part of the Construction and Operations Plan, to improve the safety of navigation around OREI.

IMPLEMENTATION. Mariners are advised that while access within an OREI is generally permitted, they must be aware that these IFS are private property and activity related to the OREI will actively be occurring. Mariners should also be aware of conditions within OREIs and consult current safety zone requirements, Notice to Mariners and nautical chart notes to comply with any restrictions that apply to the vicinity of the OREI and proceed with due caution.

DISCLAIMER. Each Coast Guard District Commander and Sector Commander has discretionary authority over how best to address specific safety and security concerns within their area of responsibility (AOR). Nothing in this NVIC is meant to override or subvert the discretion of the District Commander or Sector Commander when addressing the unique safety and security concerns for a proposed structure within their AOR. While the guidance in this NVIC may assist the Coast Guard, members of industry, the general public, and other Federal and State regulators in applying statutory and regulatory requirements, it is not a substitute for applicable legal requirements, nor is it a regulation itself. Therefore, it is not intended to, nor does it impose legally binding requirements on any party, including the Coast Guard, other Federal or State agencies, or the regulated community.

DISTRIBUTION. No paper distribution will be made of the Circular. An electronic version will be located on the following Commandant web sites; Internet: http://www.uscg.mil/hq/cg5/nvic/default.asp, and Intranet https://cgportal2.uscg.mil/library/directives/SitePages/Home.aspx.

ENVIRONMENTAL ASPECT AND IMPACT CONSIDERATION. The Office of Environmental Management, Commandant (CG-47) reviewed this NVIC, and the general policies contained within and determined that this policy falls under the Department of Homeland Security (DHS) categorical exclusion A3. This NVIC will not result in any substantial change to existing environmental conditions or violation of any applicable federal, state, or local laws relating to the protection of the environment. It is the responsibility of the action proponent to evaluate all future specific actions resulting from this policy for compliance with the National Environmental Policy Act (NEPA), other applicable environmental requirements, and the U.S. Coast Guard Environmental Planning Policy, COMDTINST 5090.1 (series).

RECORDS MANAGEMENT CONSIDERATIONS. This Circular has been thoroughly reviewed during the directives clearance process, and it has been determined there are no further records scheduling requirements, in accordance with Federal Records Act, 44 U.S.C. Chapter 31, NARA requirements, and the USCG Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). This NVIC does not have any significant or substantial change to existing records management requirements.

FORMS/REPORTS. None.

REQUEST FOR CHANGES. Questions or suggestions for improvement regarding this NVIC should be directed to Coast Guard Headquarters, Office of Navigation Systems (CG-NAV-2), using the contact information provided in the above letterhead.

W. R. Arguin
Rear Admiral, U. S. Coast Guard
Assistant Commandant for Prevention Policy

Encl: (1) Glossary and Acronyms
(2) Coast Guard District, Area and Headquarters Contact Information
(3) Coast Guard District and Area Command Boundaries

GLOSSARY AND ACRONYMS

Coast Guard Missions: The 11 Coast Guard missions are Marine safety; Search and rescue; Aids to Navigation; Living Marine Resources (fisheries law enforcement); Marine Environmental Protection; Ice Operations; Ports, Waterways and Coastal Security; Drug Interdiction; Migrant Interdiction; Defense Readiness; and other Law Enforcement (cited in 6 USC 468(a)).

Limited Access Area: Can be a safety zone or a security zone as defined in 33 CFR Part 165.
Offshore Renewable Energy Installation (OREI): A specific OREI placed in the navigable waters of the United States that creates electricity by using kinetic energy sources.

Regulated Navigation Area (RNA): A water area within a defined boundary for which regulations for vessels navigating within the area have been established in 33 CFR Part 165.

Renewable Energy Source: Source of energy used by an OREI such as, but not limited to, wind, geothermal, wave, current or solar.

Routing System: Any system of one or more routes or routing measures aimed at reducing the risk of casualties. It includes traffic separation schemes, two-way routes, recommended tracks, areas to be avoided, no anchoring areas, inshore traffic zones, roundabouts, precautionary areas, and deep-water routes.

Safety Zone: A Safety Zone is a water area, shore area, or water and shore area to which, for safety or environmental purposes, access is limited to authorized persons, vehicles, or vessels. It may be stationary and described by fixed limits or it may be described as a zone around a vessel in motion. 33 CFR Part 147.

Security Zone: A security zone is an area of land, water, or land and water which is so designated by the USCG Captain of the Port or District Commander for such time as is necessary to prevent damage or injury to any vessel or waterfront facility, to safeguard ports, harbors, territories, or waters of the United States or to secure the observance of the rights and obligations of the United States. 33 CFR Part 165.

Vessel: Every description of watercraft, including non-displacement craft, Wing in Ground Effect craft (WIG) (International – 72 COLREGS only), and seaplanes, used or capable of being used, as a means of transportation on water.

Wave Generator: A wave power device that extracts energy directly from the motion of ocean waves or from pressure fluctuations below the surface.

Wind Farm: A collection of renewable energy installations that use wind energy to create electricity.

ACRONYMS

ACRONYM	LONG TITLE
AIS	Automatic Identification System
AOR	Area of Responsibility
BNM	Broadcast Notice to Mariners
BOEM	Bureau of Ocean Energy Management
CFR	Code of Federal Regulations
CG-NAV	Office of Navigation Systems
COLREGS	Convention on the International Regulations for Preventing Collisions at Sea
IFS	Installation, Facility or Structure
LNM	Local Notice to Mariners
MSIB	Marine Safety Information Broadcast
NAVCEN	U.S. Coast Guard Navigation Center
NASEM	National Academies of Science, Engineering and Medicine
NM	Nautical Mile
NOAA	National Oceanic and Atmospheric Administration
NVIC	Navigation and Vessel Inspection Circular
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
OREI	Offshore Renewable Energy Installation
OSS	Offshore Substation
SOV	Service Operation Vessel
SPS	Significant Peripheral Structure
TEC	Tidal Energy Convertor
U.S.C.	United States Code
U.S.	United States
WEC	Wave Energy Converters
WTG	Wind Turbine Generator

ENCLOSURE (2) to NAVIGATION AND VESSEL INSPECTION CIRCULAR 03-23

USCG HEADQUARTERS, AREA, AND DISTRICT CONTACT LIST

District Commands (dp)

Tel: (617) 799-2042 First Coast Guard District Capt. John Foster Williams Bldg 408 Atlantic Avenue Boston, MA 02110-3350 24-Hour Command Center (866) 842-1560	*Tel: (510) 437-3968* Eleventh Coast Guard District Coast Guard Island Bldg 52 Alameda, CA 94501-5100 24-Hour Command Center (510) 437-3701
Tel: (757) 398-6000 Fifth Coast Guard District 431 Crawford Street Federal Bldg. Portsmouth, VA 23704-5004 24-Hour Command Center (757) 398-6231	*Tel: (206) 310-6932* Thirteenth Coast Guard District Jackson Federal Bldg 915 Second Avenue Seattle, WA 98174-1067 24-Hour Command Center (206) 220-7001
Tel: (305) 415-6727 Seventh Coast Guard District Brickell Plaza Federal Bldg 909 SE First Avenue Miami, FL 33131-3050 24-Hour Command Center (305) 415-6800	*Tel: (808) 535-3402* Fourteenth Coast Guard District Prince Kalanianaole Federal Bldg 9th Floor 300 Ala Moana Boulevard Honolulu, HI 96850-4982 24-Hour Command Center (808) 535-3333
Tel: (504) 671-2174 Eighth Coast Guard District Hale Boggs Federal Building 500 Poydras Street, Suite 1240 New Orleans, LA 70130-3310 24-Hour Command Center (855) 485-3727	*Tel: (907) 463-2802* Seventeenth Coast Guard District P.O. BOX 25517 Juneau, AK 99802-5517 24-Hour Command Center (907) 463-2000
Tel: (216) 902-6047 Ninth Coast Guard District 1240 East 9th Street Cleveland, OH 44199-2060 24-Hour Command Center (216) 902-6117	*United States Coast Guard Website:* United States Coast Guard (uscg.mil)

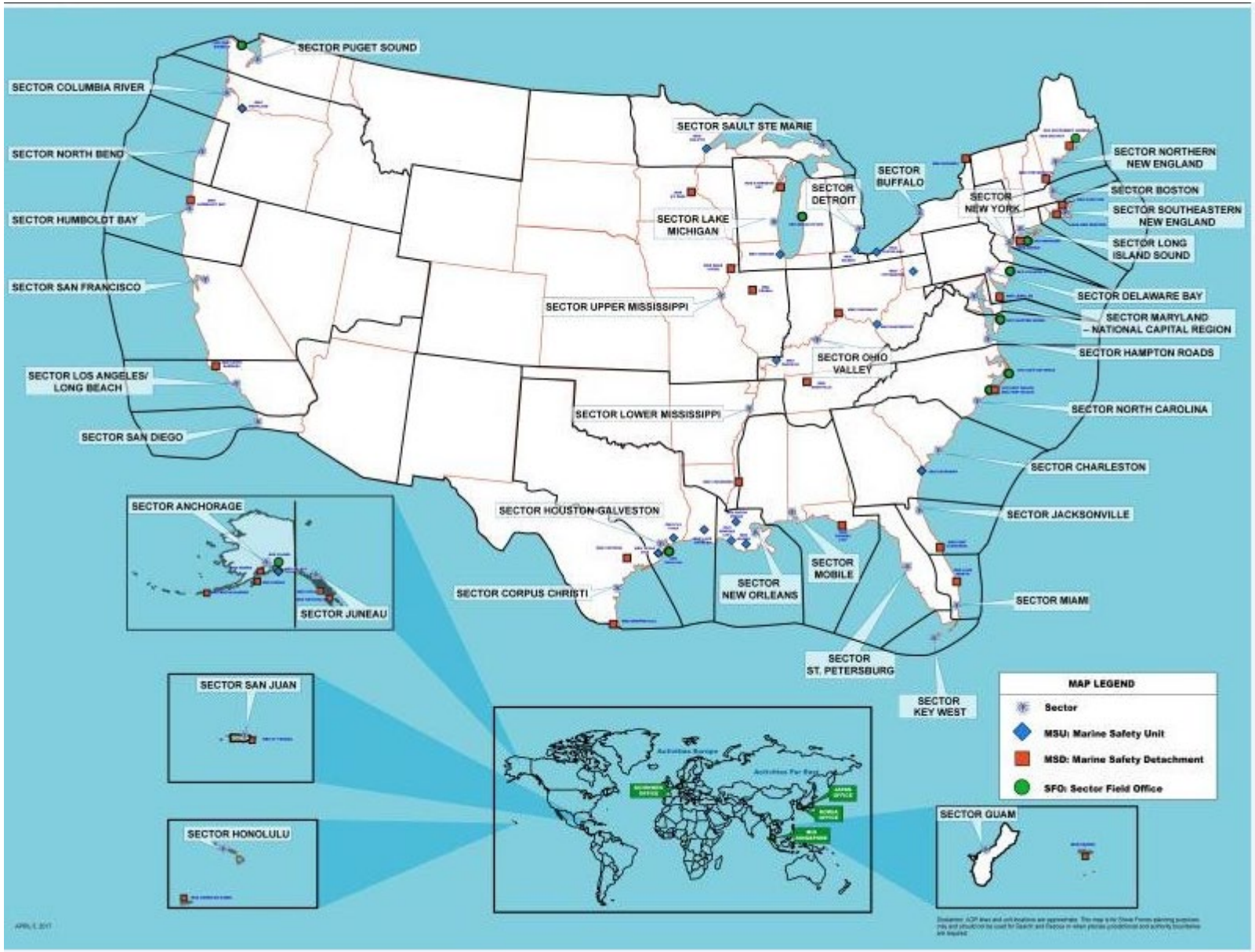
Area and Headquarters Commands

Tel: (757) 398-6746 Coast Guard Atlantic Area (LANT-54) 431 Crawford Street Federal Bldg. Portsmouth, VA 23704-5004 24-Hour Command Center (510) 437-3701 United States Coast Guard (USCG) Atlantic Area	*Tel: (510) 437-5839* Coast Guard Pacific Area (PAC-54) Coast Guard Island Bldg. 51-5 Alameda, CA 94501-5100 24-Hour Command Center (510) 437-3701 United States Coast Guard (USCG) - Pacific Area
email: CGNAV@uscg.mil COMMANDANT (CG-NAV-2) U.S. Coast Guard Stop 7418 2703 Martin Luther King Jr Ave SE Washington, DC 20593-7418 24-Hour Command Center (202) 372-2100	

ENCLOSURE (3) to NAVIGATION AND VESSEL INSPECTION CIRCULAR 03-23

US COAST GUARD DISTRICT AND AREA COMMAND BOUNDARIES

The following illustration represents each Coast Guard District's and Area's area of responsibility. For a precise listing of their boundaries, refer to 33 CFR Part 3, Coast Guard Areas, Districts, Sectors, Marine Inspection Zones and Captain of the Port Zones.


SECTOR PUGET SOUND
SECTOR COLUMBIA RIVER
SECTOR NORTH BEND
SECTOR HUMBOLDT BAY
SECTOR SAN FRANCISCO
SECTOR LOS ANGELES/ LONG BEACH
SECTOR SAN DIEGO
SECTOR ANCHORAGE
SECTOR JUNEAU
SECTOR SAN JUAN
SECTOR HONOLULU
SECTOR SAULT STE MARIE
SECTOR LAKE MICHIGAN
SECTOR DETROIT
SECTOR BUFFALO
SECTOR NEW YORK
SECTOR NORTHERN NEW ENGLAND
SECTOR BOSTON
SECTOR SOUTHEASTERN NEW ENGLAND
SECTOR LONG ISLAND SOUND
SECTOR DELAWARE BAY
SECTOR MARYLAND – NATIONAL CAPITAL REGION
SECTOR HAMPTON ROADS
SECTOR NORTH CAROLINA
SECTOR CHARLESTON
SECTOR JACKSONVILLE
SECTOR MIAMI
SECTOR UPPER MISSISSIPPI
SECTOR OHIO VALLEY
SECTOR LOWER MISSISSIPPI
SECTOR HOUSTON-GALVESTON
SECTOR CORPUS CHRISTI
SECTOR NEW ORLEANS
SECTOR MOBILE
SECTOR ST. PETERSBURG
SECTOR KEY WEST
SECTOR GUAM
MAP LEGEND
Sector
MSU: Marine Safety Unit
MSD: Marine Safety Detachment
SFO: Sector Field Office