



(U) U.S. Coast Guard C-UAS

*CAPT Eric Casper, USCG
Chief, Office of Specialized Capabilities
(CG-721)*



Agenda



- ▶ **USCG C-UAS History and Implementation**
- ▶ **Authorities and Assistance to US DoD**
- ▶ **Capabilities Overview**
- ▶ **UAS Threats in the Maritime Domain**
- ▶ **Interagency Relationships and Preparedness to Support UAS Threat Response**





History

▶ 2017:

- National Defense Authorization Act authorizes DoD C-UAS per 10 U.S.C. § 130i.

▶ 2018:

- DoD extends authority to certain USCG units to protect high value assets from UAS threats.
- Preventing Emerging Threats Act of 2018 (6 U.S.C. § 124n & 14 U.S.C. § 528) authorizes USCG to conduct C-UAS under DHS Secretary.

▶ 2019:

- USCG conducts inaugural deployment of C-UAS capabilities in support of the United Nations General Assembly in New York City, NY.
- USCG Research and Development Center develops a cutter-based C-UAS prototype to support an overseas mission.

▶ Present:

- USCG continues to use its deployable C-UAS capabilities to protect high risk facilities and assets, including special events, within the maritime domain under DHS policies.



DHS Authorized Missions (6 U.S.C. §124n)



- ▶ **National Special Security Events (NSSE)**
 - Requires Request for Assistance (RFA) from U.S. Secret Service
- ▶ **Special Event Assessment Rating (SEAR) events**
 - State, Local, Tribal, Territorial (SLTT) security agency provides survey for event to Special Events Working Group UAS Committee (SEWG-UASC)
- ▶ **Mass Gatherings**
 - Request from state/territory Chief Executive Officer
 - SLTT security agency provides survey to SEWG-UASC
- ▶ **Protection of Federal LE Investigation, Emergency Response or Security Function**
 - Request from lead federal agency
- ▶ **USCG Authorized Missions**





USCG Authorized Missions (14 U.S.C. §528)



- ▶ **Must relate to security or protection of facilities and assets that are:**
 - Assessed to be high risk and
 - Potential target for unlawful UAS activity
- ▶ **Includes:**
 - Missions directed by Secretary of Homeland Security
 - Facilities
 - Vessels or aircraft that are:
 - USCG operated or that USCG is assisting or escorting
 - Involved in a USCG mission pertaining to:
 - assisting or escorting DoD, passenger, national security significant vessels
 - protecting the President or the Vice President
 - National Special Security Event and Special Event Assessment Rating events
 - U.S. air defense
 - Search and rescue (SAR) operations



DoD Authorized Missions (10 U.S.C. §130i)

- ▶ **Must relate to security or protection of DoD facilities and assets that pertain to:**
 - Nuclear deterrence
 - Missile defense
 - National security space
 - Assistance in protecting POTUS/VPOTUS
 - Air Defense of U.S. and NCR
 - Combat support agencies
 - Special operations activities
 - Production, storage, transportation, or decommissioning of high yield explosive munitions
 - Major Range and Test Facility Base
- ▶ **Certain USCG units operate under this authority to protect DoD High Value Assets**



Capabilities

- ▶ Are aligned with the authorized actions defined in 6 U.S.C. 124n. USCG can utilize these actions to protect Covered Facilities and Assets from unlawful UAS activity:



Detect, identify, monitor, and track the unmanned aircraft system or unmanned aircraft.



Warn the operator of the unmanned aircraft system or unmanned aircraft.



Seize or exercise control of the unmanned aircraft system or unmanned aircraft.



Seize or otherwise confiscate the unmanned aircraft system or unmanned aircraft.



Disrupt control of the unmanned aircraft system or unmanned aircraft.



Use reasonable force to disable, damage, or destroy the unmanned aircraft system or unmanned aircraft.



Capabilities

Several systems providing a variety of overlapping methods of UAS Detection and Mitigation.

► Detection

- Electro-Optical/Infrared (EO/IR)
- Radar
- Passive Radio Frequency (RF)
- Acoustic

► Mitigation

- Kinetic
- Electronic: RF jamming used to neutralize or mitigate threat UAS by disrupting link between UAS and controller causing the UAS to:
 - Hover in place
 - Land in place
 - Return to “home” (original launch location)
 - Move to LE specified location
 - Spoofing



Example of a Passive RF Detection Sensor
-DHS C-UAS Tech Guide



UAS Threats in the Maritime Domain

► UAS Incidents

- UAS collisions with USCG facilities/vessels, ferries, and commercial shipping
- Abandoned UAS found on restricted USCG and commercial facilities
- UAS near-mishaps with USCG aviation assets
- Numerous UAS violating national security airspace restrictions

► Open-Source Reporting

- Use of UAS by Ukrainian and Russian forces to target warships and Critical Infrastructure (CI)
- Use of UAS to attack vessels and CI in and near Yemen and Saudi Arabia; and vessels near Syria and UAE



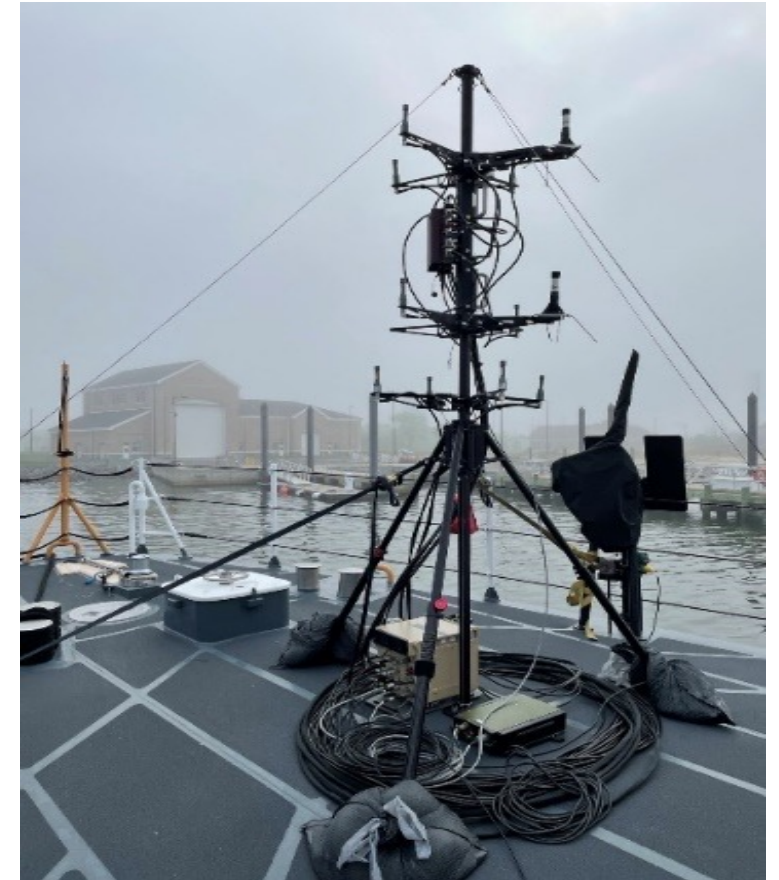
*Captured drones that attacked a Russian air base.
Russian Government Photo*



Interagency UAS Threat Response



- ▶ USCG has expansive interagency relationships through its Federal Maritime Security Coordinator and Area Maritime Security Committee authorities.
- ▶ SLTT agencies requiring C-UAS assistance reach out to agency DHS Special Event Program or local USCG Sector.
- ▶ USCG partners with federal, state, and local law enforcement to educate/warn UAS operators of airspace restrictions and violations.
- ▶ USCG coordinates with FAA Law Enforcement Assistance Program agents for enforcement action when necessary.





Questions?

