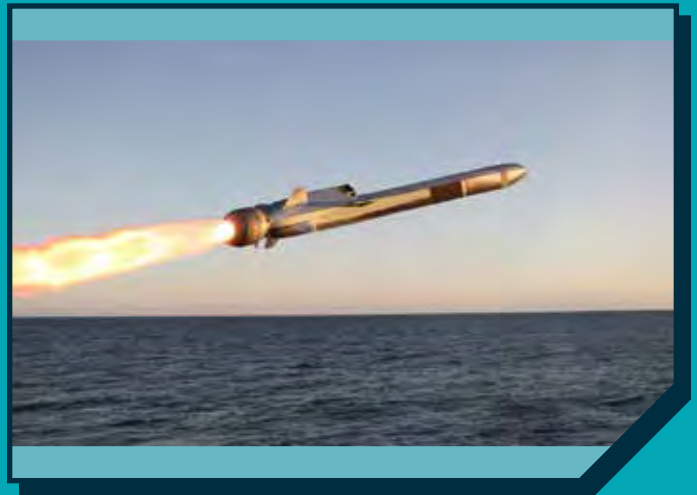


# Over-The-Horizon Weapons System (OTH-WS)

In March 2021, the Navy conducted three of six planned Over-The-Horizon Weapon System (OTH-WS) live fire test events employed from a Littoral Combat Ship. In May 2021, the Navy conducted three of six operational test firings; the remaining missions will be fired during FY22. The Navy expects to complete IOT&E in 3QFY22. The lethal effects of the OTH-WS are currently unknown and need to be adequately evaluated to support the fielding decision.



## System Description

The OTH-WS is a long-range, surface-to-surface missile employed by either the Littoral Combat Ship or the planned guided-missile frigate, intended to engage maritime targets both inside and beyond the firing unit's radar horizon. The OTH-WS is a stand-alone system consisting of an operator interface console, naval strike missile, and a missile launching system, requiring minimal integration into the host platform. The OTH-WS receives targeting data via tactical communications from combatant platforms or airborne sensors and requires no guidance after launch. The U.S. Marine Corps will employ the naval strike missiles from the Joint Light Tactical Vehicle-based mobile launch platform as a component of a Navy/Marine Expeditionary Ship Interdiction System.

## Program

OTH-WS is an Acquisition Category II, Non-Developmental Item (NDI) program. In FY18, the Navy awarded a firm-fixed-price contract to Raytheon Missile Systems to integrate the OTH-WS onto several Navy platforms. Though the program entered Milestone C in 3QFY21, the Navy has yet to submit a Test and Evaluation Master Plan to DOT&E for review and approval. IOT&E started in March 2021 and is intended to inform a full-rate production decision currently scheduled for FY22. The full-rate production decision is expected to slip to FY23 due to the test event issue in May 2021.

## Major Contractor

Raytheon Missile and Defense – Tucson, Arizona.

## Test Adequacy

In March 2021, the Navy conducted three of the planned six OTH-WS live fire test events employed from a Littoral Combat Ship at the Point Mugu Sea Range off the coast of California. In May 2021, during the execution of the remaining three live fire test events, the Navy experienced an issue and halted the remaining tests to determine the root cause. The test events were executed in accordance with a DOT&E-approved IOT&E Plan. The Navy expects to complete the remaining three live fire test events in 3QFY22.

In August 2021, the U.S. Marine Corps fired two naval strike missiles during the Large Scale Exercise at the Pacific Missile Range Facility in Hawaii. The Navy authorized the assignment of those two operational test assets to support this emergent need. The Navy coordinated with the Marine Corps to optimize this test opportunity and collect pertinent data in support of the OTH-WS operational assessment.

The Navy and DOT&E have not yet agreed to an adequate LFT&E strategy required to determine OTH-WS lethality. The Navy has not approved funding and has not planned or executed any lethality testing, precluding an assessment of OTH-WS operational effectiveness and lethality in support of the fielding decision.

## Performance

### Effectiveness

The Navy conducted three of six planned IOT&E live firing events in FY21; IOT&E is planned to complete

in 3QFY22. Based on the three live firings in FY21, the system demonstrated a potential to provide the Navy with the capability to defeat surface vessels over-the-horizon. A final assessment of the OTH-WS operational effectiveness will be provided after the completion of operational testing and required lethality testing.

### Suitability

The issue experienced during IOT&E also precluded a preliminary assessment of OTH-WS operational suitability. The Navy identified a failed component and implemented specific inspections on the naval strike missiles to prevent similar occurrences in future test events. The root cause of the failed component is still pending.

### Survivability

The Navy expects to execute a Cooperative Vulnerability and Penetration Assessment and an Adversarial Assessment in FY22 to support the evaluation of OTH-WS survivability in a cyber-contested environment.

## Recommendations

The Navy should:

1. Fund, develop, and execute a DOT&E-approved LFT&E strategy to determine the naval strike missile lethality in support of the operational effectiveness assessment and the fielding decision.
2. Continue addressing February 2020 Early Fielding Report recommendations.