NSWC Crane Electronic Warfare Center

GROUND

CONTROL THE SPECTRUM
CONTROL THE FIGHT

At a critical time our Warriors needed support and protection against Radio-controlled Improvised Explosive Devices (RCIEDs), Naval Surface Warfare Center, Crane Division (NSWC Crane) established itself as a leader in Ground Electronic Warfare.

NSWC Crane Electronic Warfare (EW) Center has supported these Ground EW efforts since 2006 and continues to extend its expertise and leadership to further support both U.S. and coalition forces. The Warfare Center assembled a critical mass of leadership in support of Counter RCIED efforts, and today more than 250 NSWC Crane experts develop and sustain these vital Warfighting capabilities.

Supporting the Warfighter

Electronic Warfare experts are dedicated to developing and deploying Counter RCIED Electronic Warfare (CREW) systems. These advanced systems provide significant Warfighter protection by preventing enemy detonation of RCIEDs. NSWC Crane continually upgrades CREW systems to keep our Warfighters ahead of the enemy and battle emerging threats in theater, providing technology insertions to our fleet.

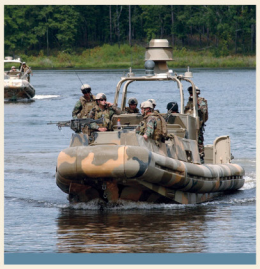
NSWC Crane provides Ground EW expertise to U.S. Navy, Air Force, Marine Corps and Army forces, as well as coalition partner forces. To ensure these Warfighters have the knowledge and capabilities to effectively operate advanced technology, NSWC Crane offers hands-on and instructional training to several groups of elite Warriors.

Anticipating future threats and Warfighter needs is a top priority for Ground EW experts at NSWC Crane. To meet emerging needs, EW Personnel assembled a team of six doctorate experts to spark innovation and develop responsive solutions for the ever-changing threat environment the fleet faces.

At any given time, NSWC Crane Ground EW experts are deployed to theater to apply their knowledge and capabilities first hand with the Warfighter. These personnel can provide advanced troubleshooting techniques and additional instruction to address the concerns the fleet may face in conflict. Another important element of NSWC Crane's in-theater support is the vehicle integration expertise and support provided to the Warfighter.

Products and Success Stories

Expanding its leadership roles to meet Warfighter needs, NSWC Crane continues to gain new assignments to efficiently manage CREW systems. As the assigned Engineering Agent for several systems, including CREW 2.1, CREW 3.1, CREW 3.2, CREW 3.3 and International CREW systems, NSWC Crane manages development to sustainment on these critical technologies.



Supporting critical mission success, NSWC Crane collaborated with other Warfare Centers to meet fleet requirements and rapidly install CREW systems on Riverine Patrol Boats and Riverine Assault Boats in 2009. These systems provide significant protection to Warfighters patrolling waterways in theater.

To test Counter RCIED technologies, NSWC Crane developed Zubowski Flats, an advanced Real Ground Antenna range. This facility allows experts to conduct extensive antenna testing year-round and rapidly implement improvements to numerous systems.

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Customers and Partners

NSWC Crane directly supports the Program Executive Officer, Littoral and Mine Warfare (PEO-LMW), specifically the Joint Counter Radio-controlled Improvised Explosive Device Electronic Warfare/Explosive Ordnance Disposal (JCREW/EOD) Program Office (PMS-408). EW/IO Center serves the Navy, Army, Air Force and Marine Corps, as well as coalition and partner nations, to ensure Warfighters are equipped with innovative CREW technology.

NSWC Crane has close partnerships with several government agencies, including Camp Atterbury Joint Maneuver Training Center, Muscatatuck Urban Training Center, Glendora Lake Test Facility and Naval Research Laboratory. NSWC Crane also partners with private industry and numerous Department of Defense (DoD) organizations to ensure capabilities are met.

Partnering with academia to increase Warfighting capabilities, NSWC Crane collaborates with educational institutes including The Johns Hopkins Applied Physics Laboratory, Indiana University-Purdue University Indianapolis, Georgia Institute of Technology and Purdue University.

NSWC Crane has recently completed construction of a realistic Ground EW test track with generated realistic electromagnetic environments allowing testing of vehicle, small boat, and man portable systems at our Lake Glendora Facility.

Leadership, Facilities and Capabilities

NSWC Crane has more than 250 civilian, contractor and military personnel who provide Ground EW expertise across multiple disciplines. Leadership assignments that NSWC Crane holds include Acquisition Engineering Agent; In-Service Engineering Agent; Technical Direction Agent; Design Agent; and Systems Integration Agent.

Ground EW experts provide innovative application of system design and development engineering to meet evolving Warfighter mission requirements. Other capabilities include:

- Science and Technology Transition
- Threat Load Development
- Antenna Characterization
- Acquisition Engineering and Logistics
- Rapid Prototyping
- Techniques Evaluation and Exploitation
- Modeling & Simulation Capabilities include:
  - *-Component Level, System, Subsystem and Antenna Modeling*
  - *-Propagation Effects*
  - *-Electromagnetic Environment*
  - *-Distributed Simulations*
  - *-Load Set Development*
  - *-Mission Effectiveness*

NSWC Crane offers both laboratory and open air range capabilities, providing value-added knowledge for EW system development. Specialized facilities include:

- Designated Classified Laboratories
- Techniques Development Laboratory
- Load Set Implementation Laboratory
- Performance Laboratory
- Zubowski Flats Realistic Ground Antenna test range
- Information Operations Test Range
- High Fidelity Network Laboratory
- Electromagnetic Environment Analysis and Development
- Four Anechoic Chambers
- Lake Glendora Realistic Test Track

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www.navsea.navy.mil/Home/WarfareCenters/NSWCCrane.aspx

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