



WWW.DRI.EDU/NESEP/REMAS

# REAL-TIME ENVIRONMENTAL MONITORING AND ALERTING SYSTEM (REMAS)

## OVERVIEW

### TURNKEY SERVICE

- Complete end-to-end solution
- At-a-glance ease of use
- Plan and obtain all necessary site permits
- Installation and routine maintenance of sensors and equipment
- Data management, security, backups and analysis
- Contractor owned and operated

### MISSION-ADAPTABLE

- Proactive integration of novel methods
- Supports the warfighter
- Meets evolving needs and test requirements
  - Develop new features and capabilities
  - Customize human interface and workflow

### SECURITY & COMPLIANCE

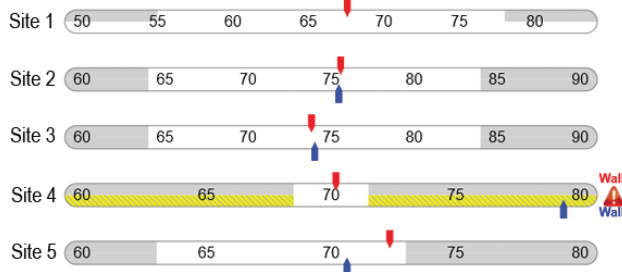
- Meets and exceeds cybersecurity requirements for CUI
- Responsive to evolving security requirements
- NAWCWD China Lake
  - Certified for use since 2014
  - Administers NAWCWD HERO & Frequency Management approved encrypted wireless network

## PROVEN, RELIABLE & SECURE

REMAS is a robust, real-time environmental data management system that measures, records, and analyzes data with alerting and on-site or web-based display. REMAS has a proven record enabling NAWCWD China Lake operations project schedule and test cadence, while ensuring data security and compliance.



### Power and Temperature Monitoring and Alarming



## OPERATIONS SUPPORT

REMAS provides US Navy personnel and stakeholders tools to support 24/7/365 situational awareness.

REMAS contributes to mission planning, decision support, routine operations, test evaluation, ordnance and test safety, forensics and disaster recovery.

REMAS provides outstanding indoor and outdoor environmental and weather awareness for ordnance development and test programs:

- Thermal conditioning monitoring for test cadence and NAVSEA OP-5 compliance
- Real-time multi-scale measurement and analysis
- Site- and mission-specific weather forecasting
- Results synthesized and displayed for at-a-glance understanding
- Reduce cost; improve safety
- Enables high-confidence preemptive scheduling to avoid adverse weather



## CONTACT

Dave Decker, Ph.D. NESEP Director and Research Professor  
2215 Raggio Pkwy., Reno, NV

PHONE: 1.775.673.7353 | EMAIL: Dave.Decker@dri.edu | WEBSITE: dri.edu/nesepp

THE DESERT RESEARCH INSTITUTE IS PART OF THE NEVADA SYSTEM OF HIGHER EDUCATION.

## ADVANCED ALERTING

REMAS provides automated notifications to designated personnel to alert when out-of-bounds conditions occur.

Navy managers can configure notifications based on severity level to escalate from simple emails to logic-based synthetic voice calling trees with prompted response.

High valued assets and data defended with redundant alert methods.

## VISUALIZATION & REPORTING

REMAS provides access to real-time data by on-site flat panel monitors and remotely by a secure web-based portal.

Standard or customized reports are downloadable for inclusion in test data packages or independent analysis.

## SUPPORT SERVICES

REMAS personnel have experience installing and maintaining monitoring systems in diverse locations: legacy and new construction test bays; ordnance magazines; engineering spaces; and stand-alone weather observation stations.

REMAS equipment has a low footprint. Virtually any sensor can be accommodated, including intrinsically safe sensors.

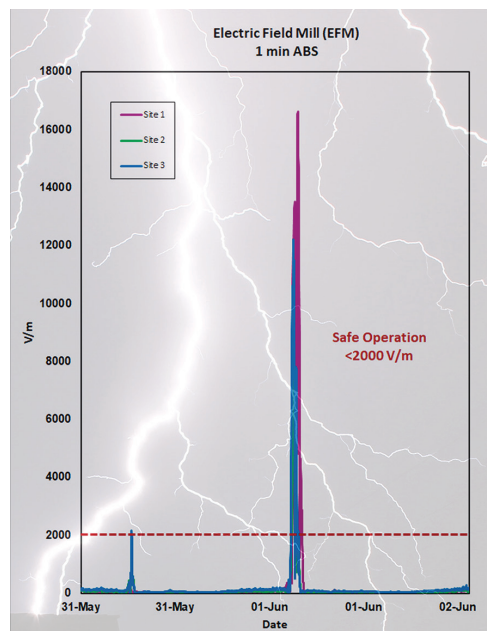
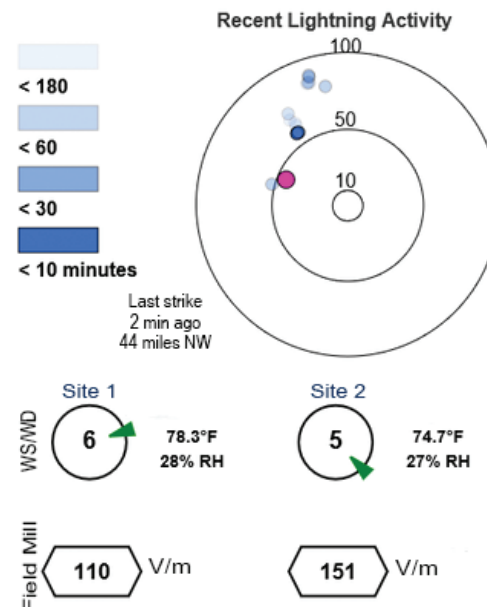
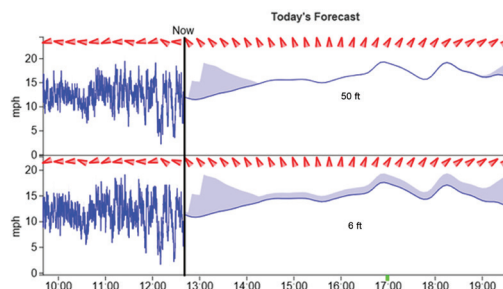
REMAS personnel are invested as Navy stakeholders and proud to serve.

REMAS is actively maintained by DRI's Naval Earth Sciences and Engineering Program (NESEP), a team dedicated to delivering applied science and engineering research services focused on USN USN partner mission objectives.



## ABOUT NESEP

The Naval Earth Sciences and Engineering Program, NESEP, was created in 2008 to provide basic and applied science and engineering research and services to NAWCWD, NAVSEA and SSP. REMAS is the first joint Navy-DRI product of NESEP and has been in continuous service to the Navy since inception in August 2010. DRI currently holds Navy contracts/subcontracts N6893617C0049, N6893919F0778, FA8240-15-R-7218, and Educational Partnership Agreement No. 16-2194-2009.



[WWW.DRI.EDU/NESEP/REMAS](http://WWW.DRI.EDU/NESEP/REMAS)

## FEATURES

### TEST PROGRAM SUPPORT

- Thermal conditioning data for go/no-go decision
- Real-time dashboard
- Post-test reporting

### WEATHER FORECASTING & ANALYSIS

- Localized and situation-specific
- Proven enabler of aggressive range test cadence objectives
- Enables planning instead of reacting
- Reduces labor, materials, and scheduling costs

### LIGHTNING & FIELD MILL

- Combines regional scale strike detection with local field mills to provide improved NAVSEA OP-5 compliance
- Addition of regional strike detection greatly extends situational awareness capabilities for deliberate hazard avoidance

### INCLUSIVE COSTS

- Costs are level-loaded and include routine system and sensor function audits and end-of-life equipment replacement
- DRI is a not-for-profit; actual costs, no fees
- Meets DCAA accounting system requirements

*All graphs contain actual REMAS data from monitoring sites at NAWCWD China Lake*



Desert Research Institute (DRI) is the research arm of the Nevada System of Higher Education (NSHE) and is a 501(c)(3) non-profit government agency of the State of Nevada. At any given time, DRI personnel conduct approximately 300 research projects worldwide and operate over 60 specialized labs & research facilities. Multiple DRI personnel hold current security clearances with DoD.