



# **2024 RITS** REMEDIATION INNOVATIVE TECHNOLOGY SEMINAR (RITS)

#### **PRESENTATIONS:**

- Applications of Multivariate Analysis (MVA) for Environmental Restoration (ER) Sites
- Considerations for Human Health Risk Assessments (HHRAs) during Remedial Investigations (RIs) at Per- and Polyfluoroalkyl Substances (PFAS) Sites
- Considerations for Conducting Ecological Risk Assessments (ERAs) at PFAS Sites
- Evaluating Climate Resilience at Navy's ER Sites
- Innovative Approaches for Delineating Hydrogeologic Heterogeneity and Groundwater Flux
- Next-Generation Data Analysis and Visualization Solutions for Environmental Remediation

# WHAT:

NAVFAC's showcase for innovative ER technology, methodology, and guidance over a two-day seminar in a classroom setting.

#### WHO:

NAVFAC Remedial Project Managers (RPMs); other Navy ER personnel; Department of Defense personnel; federal, state, or local regulators; and contractors with an active Department of the Navy (DON) ER contract are welcome to attend.

# ATTENDANCE NOTE:

Registration priority is given to Navy personnel due to limited space. For non-Navy personnel, seats will be based on availability. Contractors will be asked to provide an active DON ER contract number during registration.

\*Those without Common Access Cards (CACs) need to register 3 weeks before the RITS at NAVFAC Southwest (17–18 July) for site access processing.

# **POINTS OF CONTACT:**

Kenda Neil-Soto | NAVFAC EXWC Navy RITS Program Manager kenda.l.neil-soto.civ@us.navy.mil Desk: 805-982-6060

Leslie Howard | NAVFAC EXWC Navy RITS Deputy Program Manager leslie.a.howard11.civ@us.navy.mil Desk: 805-982-4454

# REGIONAL EVENTS:

#### NAVFAC Southeast

**12–13 June (Wednesday – Thursday)** Courtyard by Marriott Orange Park 610 Wells Road, Orange Park, FL 32073

# NAVFAC Headquarters & NAVFAC Washington

**24–25 June (Monday – Tuesday)** AMA Washington Executive Conference Center 2345 Crystal Dr, St 902, Arlington, VA 22202

# NAVFAC Atlantic & NAVFAC Mid-Atlantic

**26–27 June (Wednesday – Thursday)** DoubleTree by Hilton Norfolk Airport 1500 N. Military Highway, Norfolk, VA 23502

#### NAVFAC Northwest

**10–11 July (Wednesday – Thursday)** Oxford Suites Silverdale 9550 NW Silverdale Way, Silverdale, WA 98383

NAVFAC Southwest & BRAC PMO West 17–18 July (Wednesday – Thursday) Conference Room A&B 750 Pacific Highway, San Diego, CA 92132

NAVFAC Pacific & NAVFAC Hawaii 24–25 July (Wednesday – Thursday)

Oahu Veterans Center 1298 Kukila Street, Honolulu, HI 96818

# LAST DAY TO REGISTER:













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# Agenda RITS Day 1 Presentations (Times subject to change)

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0800 – 0815	RITS Welcome & Introduction
0815 – 0915	Considerations for Conducting ERAs at PFAS Sites Navy sites are transitioning from Preliminary Assessments/Site Inspections (PA/SIs) to Remedial Investigations (RIs) at sites with confirmed PFAS environmental releases. This presentation will discuss development of the conceptual site model; current data gaps and applicable recommendations; important potential ecological exposure pathways; selection of assessment and measurement ecological endpoints; potential uncertainties; ambient anthropogenic background considerations; and the nuances of sample collection and analysis to support the ERA and appropriate risk management decisions for a site. SPEAKERS: Jason Conder (Geosyntec), Jenn Arblaster (Geosyntec), and Jason Speicher (NAVFAC LANT)
0915 – 0930	Break
0930 – 1045	Considerations for Conducting ERAs at PFAS Sites, Continued SPEAKERS: Jason Conder (Geosyntec), Jenn Arblaster (Geosyntec), and Jason Speicher (NAVFAC LANT)
1045 – 1100	Break
1100 – 1200	Considerations for HHRAs during RIs at PFAS Sites Navy sites are transitioning from PA/SIs to RIs at sites with confirmed PFAS environmental releases. This presentation will discuss current recommended approaches for completing the HHRA; development of the conceptual site model; default and site-specific exposure scenarios; assessing cumulative risk considerations for historical sites, where PFAS are now being evaluated; ambient anthropogenic background considerations; and the nuances of sample collection and analysis to support the HHRA and appropriate risk management decisions for a site. SPEAKERS: Nikki Andrzejczyk (NAVFAC EXWC) and Jenn Corack (NAVFAC LANT)
1200 – 1315	Lunch
1315 – 1415	Considerations for HHRAs during RIs at PFAS Sites, Continued SPEAKERS: Nikki Andrzejczyk (NAVFAC EXWC) and Jenn Corack (NAVFAC LANT)
1415 – 1430	Break
1430 – 1530	Evaluating Climate Resilience at Navy's ER Sites Depending on location and other physical characteristics, climate-related hazards could impact potential remedial alternatives or remedy protectiveness at Navy ER sites in the future. This presentation will focus on the recently prepared NAVFAC framework and its methodology and resources for conducting a climate resilience assessment at Navy ER sites; relevant portions of early guidance from the United States Environmental Protection Agency and states; and the implications for future site management decisions. SPEAKERS: Karla Harre (NAVFAC EXWC), Arun Gavaskar (NAVFAC EXWC), Erika Beyer (NAVFAC EXWC), and Ricardo Estrada (NAVFAC EXWC)
1530 – 1545	Break
1545 – 1630	Evaluating Climate Resilience at Navy's ER Sites, Continued SPEAKERS: Karla Harre (NAVFAC EXWC), Arun Gavaskar (NAVFAC EXWC), Erika Beyer (NAVFAC EXWC), and Ricardo Estrada (NAVFAC EXWC)
1630	Adjourn

# Agenda RITS Day 2 Presentations (Times subject to change)

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0800 – 0815	RITS Welcome & Introduction
0815 – 0915	Next-Generation Data Analysis and Visualization Solutions for Environmental Remediation Innovative, robust, and defensible data tools and solutions are available and capable of reducing project costs; automating reports; improving communications between internal and external stakeholders; and enhancing informed decision-making at Navy sites. This presentation will discuss and provide examples through case studies on how several geospatial or visualization tools and solutions are available to RPMs for use at any time in the project lifecycle. SPEAKER: Todd Kremmin (Jacobs)
0915 – 0930	Break
0930 – 1015	Next-Generation Data Analysis and Visualization Solutions for Environmental Remediation, Continued SPEAKER: Todd Kremmin (Jacobs)
1015 – 1030	Break
1030 – 1130	Innovative Approaches for Delineating Hydrogeologic Heterogeneity and Groundwater Flux There are newly developed, innovative approaches for delineating hydrogeologic heterogeneity and measuring groundwater flow, which are available to RPMs, to improve site management decisions and remedial actions. This presentation will provide an overview, including case studies, of new analytical tools or novel measurement approaches, including hydraulic and geophysical tomography; tracer monitoring; real-time terrestrial, surface water, and airborne sensing tools; and thermal imaging. SPEAKERS: Chin Man "Bill" Mok (GSI Environmental), Dimitrios Ntarlagiannis (Rutgers University), and David Rey (United States Geological Survey [USGS])
1130 – 1245	Lunch
1245 – 1330	Innovative Approaches for Delineating Hydrogeologic Heterogeneity and Groundwater Flux, Continued
	SPEAKERS: Chin Man "Bill" Mok (GSI Environmental), Dimitrios Ntarlagiannis (Rutgers University), and David Rey (United States Geological Survey [USGS])
1330 – 1345	SPEAKERS: Chin Man "Bill" Mok (GSI Environmental), Dimitrios Ntarlagiannis (Rutgers University),
<mark>1330 – 1345</mark> 1345 – 1445	SPEAKERS: Chin Man "Bill" Mok (GSI Environmental), Dimitrios Ntarlagiannis (Rutgers University), and David Rey (United States Geological Survey [USGS])
	<ul> <li>SPEAKERS: Chin Man "Bill" Mok (GSI Environmental), Dimitrios Ntarlagiannis (Rutgers University), and David Rey (United States Geological Survey [USGS])</li> <li>Break</li> <li>Applications of MVA for ER Sites</li> <li>The Navy is increasingly looking for innovative ways to evaluate complex site data in a manner that is robust and defensible. MVA methods can be used to evaluate patterns or relationships in data that cannot be readily discerned using univariate analysis methods. This presentation will provide an overview, including case studies, of how MVA methods can be used as part of a "multiple lines of evidence" approach to inform risk management decisions at Navy sites.</li> </ul>
1345 – 1445	<ul> <li>SPEAKERS: Chin Man "Bill" Mok (GSI Environmental), Dimitrios Ntarlagiannis (Rutgers University), and David Rey (United States Geological Survey [USGS])</li> <li>Break</li> <li>Applications of MVA for ER Sites</li> <li>The Navy is increasingly looking for innovative ways to evaluate complex site data in a manner that is robust and defensible. MVA methods can be used to evaluate patterns or relationships in data that cannot be readily discerned using univariate analysis methods. This presentation will provide an overview, including case studies, of how MVA methods can be used as part of a "multiple lines of evidence" approach to inform risk management decisions at Navy sites.</li> <li>SPEAKER: Loren Lund (Jacobs)</li> </ul>

