

ICISS has **Services Experience** in the following **Program Areas**:

Research and Development Support: in support of the Defense Threat Reduction Agency (DTRA), ICESS provides assessments of critical defense communications systems and subsystems requirements related to Radio Frequency (RF) threats, including High-Altitude Electromagnetic Pulse (HEMP), Geomagnetic Disturbances (GMD), and Radio-Frequency Weapons (RFW). ICESS Subject Matter Experts (SMEs) additionally perform technical assessments related to: Magneto Hydrodynamic Electro Magnetic (EM) Pulse (MHD EMP); Source Region EM Pulse (SREMP); RF Emanations Security (EMSEC) and signals exploitation related to the Study and Control of Spurious Electronic Signals Emitted By Electrical Equipment (TEMPEST); and EM interference/EM compatibility (EMI/EMC). Currently performed in Zone 2

Additionally, for the NAVSEA Indian Head Energetics Group, ICESS performed PhD-level trace chemical weapons detection R&D. Performed in Zone 2.

Engineering, System Engineering and Process Engineering Support: for the Navy Antiterrorism Force Protection (ATFP) Ashore Program, ICESS provides application of engineering disciplines to technically support development of new or improved naval capabilities and systems related to:

- Physical Security Systems (PSE) in the areas of Access Control, Air Defense, Counter-Bomber, Explosive Detection, Vehicle Inspections, Intrusion Response, and Waterside Security to specifically include Automated Pedestrian Turnstiles (APT), Gate Automation, Automated Vehicle Gate High Volume (AVG-H), Automated Vehicle Gate Low Volume (AVG-L), Boat Barriers, Electronic Harbor Security System (EHSS), Vehicle Inspection Cargo Screen (VICS), General Security Enclave, Airfield Security Enclave, and Pier Security Enclave. These security enclaves mentioned include multiple deterrence, detection, surveillance, and tracking technologies at ground level and above and below ground/water.
- Command and Control (C2) technologies include Wide Area Alert Notification (WAAN) systems, and other emergency notification systems such as Giant Voice/Indoor Voice (GV/IV), Automated Telephone Notification System (ATNS), and Computer Desktop Notification System (CDNS).
- Chemical Biological Radiological Nuclear (CBRN) Technologies in the areas of CBRN detection equipment, CBRN monitoring equipment for First Responders, CBRN Protection systems and protective equipment to include Personal Protection Equipment (PPE), CBRN Response equipment, CBRN Recovery systems, and CBRN decontamination equipment and materials.

Currently performed in Zone 2 and Zone 6.

Modeling, Simulation, Stimulation, and Analysis Support: in support of DTRA, ICESS uses Critical Nuclear Weapons Design Information (CNWDI) to provide Modeling, Simulation, and Analysis of Electromagnetic Pulse (EMP) effects on Tier 1 DOD systems, and provides Modeling and Simulation (M&S) and analysis of the efficacies of related proposed EMP protection measures. ICESS additionally provides analysis of vanguard EMP effects M&S technologies for DTRA. Suites of deterministic simulations are analyzed in ensemble form for statistical metrics applicable for the systems under study. Inherently statistical data sets are further analyzed to quantify the specific system threat against the broad spectrum of general threats against DOD systems. Currently performed in Zone 2.

System Design Documentation and Technical Data Support: for the Navy ATFP Ashore Program, ICESS provides system design documentation and tech data support for the ATFP technology systems and families of systems listed above in Seaport-e Functional Service area 2 for PSE, C2, and CBRN technology. Currently performed in Zone 2 and Zone 6.

Software Engineering, Development, Programming, and Network Support: ICESS' work designing, developing and managing a Microsoft SharePoint™ based USACE Force Protection Program asynchronous on-line portal for use USACE-wide earned honors as a 2013 *Army-wide* best practice. Currently performed in Zone 2.

Reliability, Maintainability, and Availability (RM&A) Support: for the Navy ATFP Ashore Program, ICESS provides program management, sustainment strategy development, and technical sustainment support related to all

deployed ATFP systems to include specific oversight of the Global Sustainment Contract (GSC) and the separate Enterprise Land Mobile Radio (ELMR) Sustainment Contract. Currently performed in Zone 2 and Zone 6.

Human Factors, Performance, and Usability Engineering Support: ICESS is providing support to the US Army Emergency Management Modernization Program (EM2P) Human Systems Integration (HSI) program. HSI is the integrated and comprehensive analysis, design and assessment of requirements, concepts and resources for EM2P system manpower, personnel, training, environment, safety, occupational health, habitability, survivability, and human factors engineering, with the aim to reduce total EM2P ownership cost, while optimizing total mission performance. Specifically for EM2P ICESS prepares Emergency Management Activity Diagrams (EMAD) in support of Enhanced 9-1-1 (E9-1-1) and Mass Warning and Notification (MWN) system solutions. EMAD diagrams map all E9-1-1 and MWN Human Systems Integration (HSI)-related activities required in response to an emergency; the time (duration) that each activity will take to complete; the dependencies between the activities; and the logical end points such as milestones or deliverable items related to emergency response and recovery at US Army Garrisons in the continental US. Currently performed in Zone 2 and Zone 6.

System Safety Engineering Support: in providing Systems Engineering and Integration (SE&I) support to the Navy ATFP Ashore Program, ICESS ensures safety is considered in all aspects of design, development, operation, and maintenance of deployed program systems. Under this DOD 5000 compliant and ACAT-1 equivalent program ICESS is specifically responsible for Development, Update and Implementation of Business Management System (BMS) processes that include the so-called Maintenance Execution Safety and Environmental Oversight Process that outlines required system safety engineering support during deployed system sustainment operations. Currently performed in Zone 2 and Zone 6.

Configuration Management (CM) Support: ICESS's SE&I support to the Navy ATFP Ashore Program historically required storing, tracking, and updating of all system information on a component, subsystem, and system basis, for all deployed and installed systems. ICESS is currently responsible for approval and oversight of the management of the Global Sustainment Contract (GSC) Configuration Management (CM) plan. Currently performed in Zone 2 and Zone 6.

Quality Assurance (QA) Support: ICESS applies engineering and analytical discipline to provide QA support to the Navy ATFP Ashore program, specifically related to the work of 3rd party contractors. By contract ICESS is required to monitor 3rd party project execution (technology installation and start up) and follow-on sustainment efforts "against schedules and budgets, *project quality* and customer satisfaction". We are currently providing QA for 125 concurrent projects worldwide. Currently performed in Zone 2 and Zone 6.

Information System (IS) Development, Information Assurance (IA), and Information Technology (IT) Support: the work ICESS performed from the USACE under Functional Service Area 6 described above certainly illustrates ICESS' ability to analyze existing IT applications and recommend improved interfaces and improved management tools to improve management effectiveness and efficiency. Currently performed in Zone 2.

Additionally, for the Navy ATFP Ashore program, ICESS is responsible for ensuring Federal Information Security Management Act (FISMA) testing is conducted on one third of all deployed equipment annually so that all equipment under sustainment is tested over a three year period. Currently performed in Zone 2 and Zone 6.

Interoperability, Test and Evaluation, Trials Support: for the developed PSE and C2 systems being deployed under the Navy ATFP Ashore Program, ICESS provides SE&I support to ensure these systems have been properly tested and that interoperability requirements have been fully met at all levels of their life cycle. For both original systems installations and currently for systems sustainment, ICESS is contractually responsible that 3rd party contractors "ensure and maintain interoperability of components and systems", and to ensure that "any hardware replacement that affects systems interfaces... shall preserve all previously-designed interoperability within that system or interoperability with other systems". Currently performed in Zone 2 and Zone 6.

Logistics Support: ICESS provides and otherwise superintends all Integrated Logistics Support (ILS) planning and support for the Navy ATFP Ashore Program. ICESS provides expertise in logistics support related to ATFP technology deployment and sustainment and is currently specifically responsible for recommendations to the

NAVFAC ATFP Ashore Program ILS Manager/Sustainment Assistant Federal Program Manager regarding sustainment Service Provider/Contractor waiver submittals/approvals/disapprovals, ticket closures, status updates, problematic tickets and issues, and Service Provider/Contractor Engineering Change Proposal (ECP)/Project Deviation Request (PDR) generation and submittal. ICESS is also responsible to develop and maintain the Contractor User Guide for the ATFP Ashore Remedy System and ATFP Information Module (AIM) Portal that guides and details 3rd party contractor *logistics* responsibilities and ATFP Ashore processes with regard to the reporting and handling of assets, configuration management, corrective and preventive maintenance, training, documentation, and deliverables. Currently performed in Zone 2 and Zone 6.

Supply and Provisioning Support: in its superintendence on behalf of the Navy ATFP Ashore program of the Navy ATFP program's Global Sustainment Contract (GSC) and the separate Enterprise Land Mobile Radio (ELMR) Sustainment Contract ICESS ensures maintenance materials are available when required, that materials are properly stored and transported, and that inventories are managed in a cost effective manner. Currently performed in Zone 2 and Zone 6.

Technical Training Support: For the US Army Emergency Management Modernization Program (EM2P), ICESS provides Emergency Management Training Drills (at 22 Army Garrisons to date); Emergency Tabletop Training Exercises (at 21 Army Garrisons to date); Senior Leadership Emergency Training Seminars (2 to date); and Emergency Management Training Workshops (2 to date). Currently performed in Zone 2 and Zone 6.

For CNIC, ICESS integrated Operator Training for all CBRN-Defense technology and other equipment solutions deployed to Navy bases by the Joint Project Manager Guardian (JPMG) Installation Protection Program (IPP). JPMG IPP deployed systems included:

- JPMG's fielded Decontamination Tent
- U.S. Navy Bureau of Medicine and Surgery's (BUMED's) fielded pharmaceutical countermeasures
- Joint Project Manager Information System (JPMIS) and the JPMG Decision Support System (DSS 5.0). JPMIS is a powerful Medical Surveillance tool that predicts geographic areas affected by the outbreak of illnesses related to CBRN plumes. In concert with JPMIS, DSS 5.0 can upload census data for Medical Officers to project outbreak of illness statistics to assist in medical response
- The Draeger PSS7000 Defense Version Self-Contained Breathing Apparatus
- The FLIR (icx) IdentiFINDER LaBr3 handheld digital gamma spectrometer
- The Thermo Scientific (Formerly known as Ahura) TruDefender handheld Fourier Transform Infrared Spectroscopy (FTIR) system for rapid, in the field identification of unknown chemicals
- Smith's Detection Aldrich ICHM package Library used to upgrade current hazardous material identification (HAZMAT ID) systems, which contains 25,470 single reflection diamond attenuated total reflection (ATR) spectra of various organic and inorganic chemicals
- The Smart Air Sampler System 3100 (SASS® 3100), a high efficiency dry filter sampler developed for the collection of airborne particulates, especially pathogenic bacteria and spores.

Was performed in Zone 2 and Zone 6.

Professional Development and Training Support:

ICESSE provided classroom instruction in physical security and Antiterrorism at the USACE Deployment Center to all USACE military, civilian, and contractor personnel - and Army Materiel Command civilians - deploying to Iraq and Afghanistan. Was performed Zone 2.

ICESSE provided Respiratory Protection Program (RPP) curricula development and classroom instruction at 33 Navy installations for Commander Navy Installations Command (CNIC). Was performed in Zone 2 and Zone 6.

ICESSE provided consulting and advisory services to the Navy related to CBRN Response Training and compliance with 29 CFR 1910.120 (Hazardous waste operations and emergency response). Over 5,000 Navy and surrounding civilian jurisdictions' First Responders were trained. Was performed in Zone 2 and Zone 6.

Program Support: ICESS provides ongoing Program Support to the Navy ATFP Ashore Program to include: Strategic Planning for ATFP Technology Programs; ATFP Technical Studies and Analysis; ATFP Technology Assessments; ATFP Technology Risk Analysis and Recommendations; Logistics Analysis and Assessments; Oversight of ATFP System Specification Development; Acquisition and Procurement support; Process Assessments; ATFP Concept Development and Requirements Analysis; Systems Engineering; Documentation and reporting; ATFP IPT Support and related Technical Assistance; Integration of ATFP Engineering Support; Integration of ATFP Test and Evaluation Support; and Integration of ATFP Systems and Subsystems. Currently performed in Zone 2 and Zone 6.

ICESSE provides the US Department of Homeland Security (DHS) National Protection and Programs Directorate (NPPD) Office of Infrastructure Protection (OIP) Infrastructure Security Compliance Division (ISCD) with Chemical Facility Anti-Terrorism Standards (CFATS) regulatory and compliance support to include peer reviews of industry-conducted vulnerability assessments and similar reviews of industry-prepared site security plans. Currently performed in Zone 2.

Clerical and Administrative Support: ICESS provides technical writing and technical editing expertise to the Defense Threat Reduction Agency (DTRA) Balanced Survivability Assessment (BSA) Blue Team program. Currently performed in Zone 2.

ICESSE also provides technical writing and technical editing expertise to the DHS Domestic Nuclear Detection Office (DNDO) in support of Securing the Cities Program. Currently performed in Zone 2.