



US Army Soldier Systems Center Natick, Massachusetts

JEFF WALLACE

Mechanical/Project Engineer
PMFSS-Field Feeding Team and Combat Feeding Directorate
US Army Soldier Systems Center

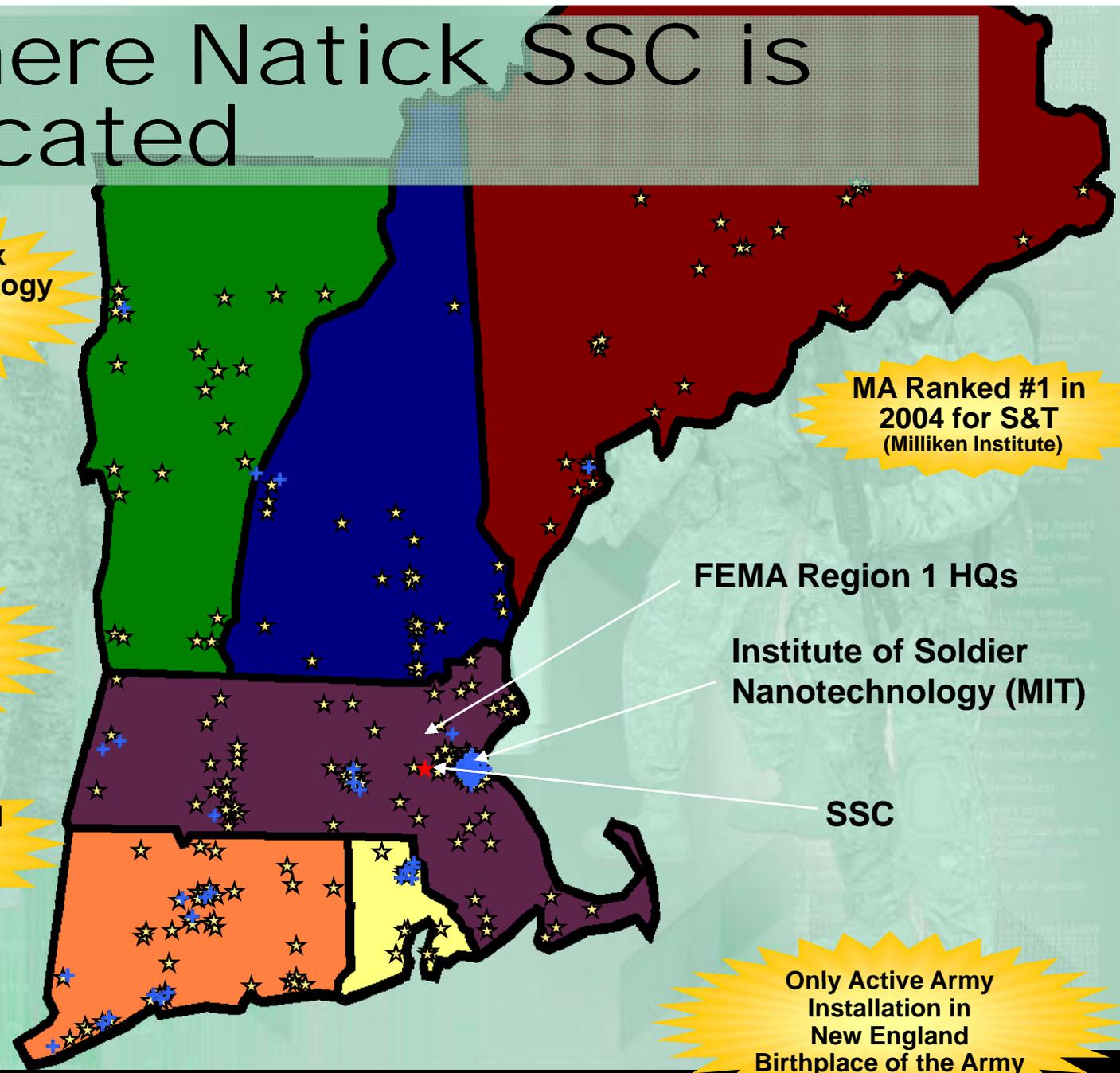


Who Natick SSC is





Where Natick SSC is Located



MA One of Six Leading Technology States
(US Census)

MA Ranked #1 in 2004 for S&T
(Milliken Institute)

226 Accredited Academic Institutions in New England

World's Highest Concentration of Academia

FEMA Region 1 HQs

Institute of Soldier Nanotechnology (MIT)

MA Ranked #3 for Total R&D Expenditures
(National Science Foundation)

SSC

Only Active Army Installation in New England
Birthplace of the Army

★ Academia + Research Hospitals



What Natick SSC Does

From S&T to Sustainment

Technologies:

- *Military Nutrition*
- *Warrior Systems Tech & Integration*
- *Environmental Physiology*
- *Warrior Performance*
- *Biomechanics*
- *Food Science*
- *Anthropometry*
- *Nanotechnologies*
- *Biotechnology*
- *Individual and Small Unit Modeling & Simulation*
- *Precision Airdrop Technologies*



Products & Warfighter Capabilities:

- *Combat Rations*
- *Chemical Protective Clothing*
- *Warrior Systems*
- *Aerial Delivery*
- *Clothing & Individual Equipment*
- *Field Feeding*
- *Firefighting & Flame Resistant Clothing*
- *Shelter Systems / Collective Protection*
- *Field Services*
- *Anti-Exposure Suits*
- *Shipboard Protective Equipment*
- *Homeland Security*

Supporting the Warfighter and the Joint Force



Natick Soldier RDE Center



- RDT&E to maximize the Warrior's **Survivability, Sustainability, Mobility, Combat Effectiveness and Field Quality of Life** by treating the Warrior as a System
- Adding Value Through:
 - Technology Generation, Application, and Transition Enabling Rapid Fielding of the Right Equipment
 - Soldier Systems Technology Integration and Transition
 - Solving Field Problems Rapidly

**Transformation to the Future Force
with the Soldier as the Centerpiece
of the Formation**



Airdrop/
Aerial Delivery



Individual
Protection



Collective
Protection



DOD Combat
Feeding



Product Manager Force Sustainment Systems (PMFSS)



- Responsible for the centralized management, program oversight, and direction for the development, production, and deployment of items in the soldier support commodity areas.
 - Cargo air drop systems
 - Laundries
 - Showers
 - Non-powered heaters
 - Rigid and softwall shelters
 - Field feeding equipment
 - Force Provider system



Integrated Logistics Support Center (ILSC)



- Provide innovative, robust and streamlined total life cycle logistics and materiel readiness support to all DoD organizations for Warfighter and Chemical Biological Defense Equipment



- Materiel Management
- War Reserve Management
- Maintenance & Overhaul-RESET
- Field Technical Assistance
- Integrated Logistics Support
- Materiel Fielding and Training
- Technical Publications



Ongoing Production Efforts for Army Field Feeding Equipment

- **CK: In production and fielding since 2001**
- **MKT: Undergoing RESET since 2004**
- **FSC: Production and fielding resumed in 2006 and is ongoing.**
- **Refrigerated Container System (RCS): Production and fielding resumed in 2006 and is ongoing**





Army Field Feeding Improvements in Development

- CK: Thermal Fluid Heating
- FSC – Burner fume mitigation and reduce water use
- MKT - RESET Kit (3-KW generator, oven, skillet)
- Assault Kitchen (AK) – Heat on the move tray ration heater
- Self Powered Tray Ration Heater for AK
- Sanitation Kit for Forward Deployments such as AK/KCLFF
- Battlefield Kitchen (BK) – Future replacement for MKT
- Multi Temperature Refrigeration Container System (MTRCS)
- Medical Feeding Cart



Thermal Fluid Heating (CK - TFH)

- Objective(s):

- Comprehensively address the pre-planned product improvements called for in the CK ORD
- Eliminate the need for a separate field sanitation center and its associated transportation asset
- Increase worker safety, comfort and effectiveness.

- Capability Provided:

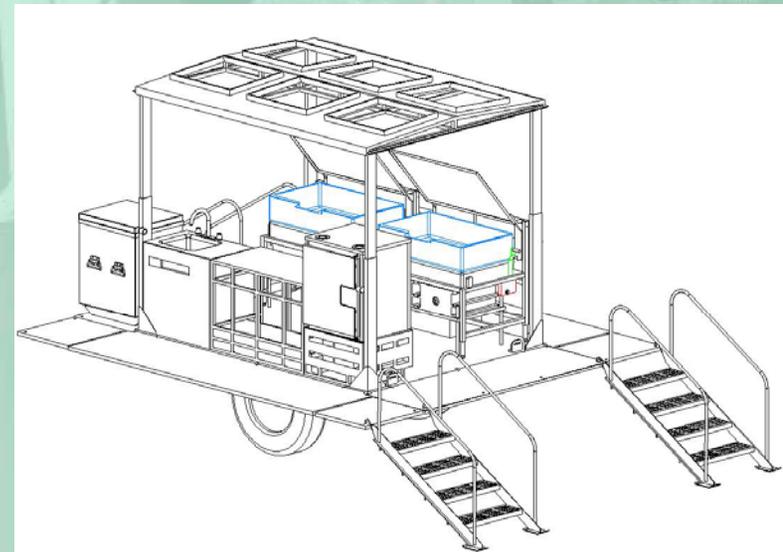
- Restaurant-Style appliances provide greater user flexibility while maintaining capability to feed 800 warfighters, three meals/day
- Integrated Food Sanitation Center onboard that meets the requirements of the FSC ORD





MKT Reset Kit Improvements Program

- Objective(s):
 - Develop a kit to improve the capability of MKTs going through RESET
 - Assure the MKT remains relevant and effective as a field-feeding asset for its remaining life cycle
- Capability Provided:
 - Updated food preparation equipment
 - Improved power source
 - Reduced fuel consumption





Assault Kitchen (AK)

- **Objective(s):**
 - Develop a lightweight, mobile field feeding platform to support the forward deployed Warfighter
 - Functionally replace the Kitchen, Company Level Field Feeding (KCLFF)
- **Capability Provided:**
 - Heat-on-the-move field feeding
 - Near instantaneous feeding at remote site
 - Reduced feeding site food preparation time





Multi Temperature Refrigeration Container (MTRCS)

- Replaces current Refrigerated Container System with dual temp capability
- First Article fabrication Completed & testing underway
- TM, RPSTL, and Training document revisions
- Full Materiel Release projected for June 08





Battlefield Kitchen (BK)

- Purpose is develop eventual replacement for MKT
- Working Group Meeting – User Discussions, 14 December 2007 @ Fort Lee to begin establishing requirements
 - CASCOM and ACES present with PM-FSS and several User Representatives participated by phone
 - *Prime mover; power source; feeding capabilities; desired Appliances (thermostatic controlled); instant hot water; sanitation; environmental and set up and tear down all discussed*
 - *Most note worthy requirement emerging is the ability to remove the appliances from the kitchen to set up in building.*
 - *Requirement may limit some technologies*
 - *Concern about venting combustion products in buildings*



Natick's Goals This Week

- **Present displays of fielded equipment to facilitate a cross-feed of information between you and Natick's Subject Matter Experts (SME)**
 - Containerized Kitchen (CK)
 - Mobile Kitchen Trailer (MKT)
 - Food Sanitation Center (FSC)
 - Modern Burner Unit (MBU)
- **Address your concerns and questions regarding field-feeding equipment**
- **Get your feedback on what is working well and what needs improvement**
- **Inform you of Natick's overall mission and ongoing efforts to develop new field-feeding products**



SSC



??s