

Natick Soldier Research, Development and Engineering Center

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September 29, 2014

FOR IMMEDIATE RELEASE

#14-09-01

NSRDEC, West Point collaborate to support innovative Soldier science and technology



Novel research into energy harvesting methods to lighten Soldiers' load

Natick, MA- The U.S. Military Academy at West Point and the U.S. Army Natick Soldier Research, Development, and Engineering Center have mutual interest in identifying research opportunities from within NSRDEC for execution within USMA's Academic Departments and its Centers, resulting in a Memorandum of Understanding to collaborate on researching innovative technologies such as methods to harvest energy on the battlefield to lighten Soldiers' load and reduce dependency on batteries.

Research will be conducted through year-long programs across multiple departments. The cadet teams will deliver final briefings during Projects Day presentations at USMA and additional research will include the USMA Cadet Leadership Development Training (CLDT) that will take place in 2015.

The formal agreement involves joint collaborative research projects between NSRDEC and West Point encouraging exchange visits by researchers, faculty and cadets to each site, with both organizations allowing access to facilities, training sites, research staff, historical data and field equipment.

The collaboration will also focus on the creation of an 'experimental squad' structure using West Point's senior class annual field training exercise as a test platform where several NSRDEC technologies will be deployed with cadets in the CLDT. The intense, ten-day field problem centers on leader development and allows every cadet to rotate through leadership positions based on the Army's elite Ranger school.

During this training there will be one experimental platoon among the 24 cadet platoons. This platoon will be equipped with Energy Harvesting Technologies, a NSRDEC developed Mission Planning Tool, and cadets will assist NSRDEC in the development of Nett Warrior Apps to be used on enabled handheld devices to enhance future leader awareness of emerging technology and the importance of integrating this technology.

Other technology thrust areas include research focusing on the specific relationships between Soldier load and biomechanics; thermal modeling and simulations related to flame retardant textiles; anthropometry and anthropology studies regarding the shape of the human head in relation to the shape of the ballistic helmet; development of an individual cooling system; and means to reduce the energy consumption and improve the survivability for expeditionary basing shelters.

NSRDEC is an Army research and development laboratory with the dedicated mission to maximize the Warfighter's survivability, sustainability, mobility, combat effectiveness and quality of life by treating the Soldier as a System. The organization has long had a close relationship with West Point-- hosting cadets during summer internships, collaborating on research projects associated with Soldier protection and sponsoring scientific information exchanges.