Adapting Landscape Modeling Technologies for Sustainable Military Readiness

Integrating Wildfire Risk with the Forestry Management Goals of Biodiversity, Security, Safety, and Sustainability

On behalf of the Command Navy Region Northwest, Naval Facilities Engineering Northwest Command, Fort Lewis, and Engineer Research and Development Center Construction Engineering Research Laboratory, the National Defense Center for Environmental Excellence (NDCEE) is evaluating landscape management software to support military readiness activities.

Landscape Management System (LMS)

- Integrates 20+ growth, treatment, spatial, and visualization models into a single, user-friendly software application package

DoD forested lands are managed for multiple objectives

- Developed by the University of Washington, Yale University, and USDA Forest Service
- Maintained by Rural Technologies Initiative (RTI), a research & technology transfer consortium between the University of Washington and Washington State University
- Publicly available at: http://lms.ce.washington.edu

Military Benefits

- Supports decision making by assessing multiple, often competing, outcomes and promoting an understanding of the complexity and consequences of forestry actions
- Supports fire hazard mitigation, timber yield, carbon sequestration, and wind risk analyses as well as visual impact analysis of targeted view sheds
- Helps land managers to maintain healthy forests over the long term
- Improves ability to manage natural resources to meet mission objectives

Contacts:

- Ms. Terri Jones, NAVFAC NW, 360-396-5091, terri.jones@navy.mil
- Ms. Donna Provance, NDCEE/CTC, 919-303-4323, provance@ctc.com
- Dr. Chris Rewerts, ERDC/CERL, 217-373-5825, chris.rewerts@us.army.mil

Management alternatives can be projected through time with growth and yield models inside LMS

Photos Courtesy of the U.S. Navy.

Connecting the Forest to the Office

NDCEE National Defense Center for Environmental Excellence

DoD Executive Agent
Office of the Assistant Secretary of the Army (Installations and Environment)

NDCEE is operated by: CERD - Center for Environmental Research and Development

Located in Washington’s Puget Sound, Naval Magazine (NAVMAG) Indian Island is the deepest ordnance port in the Northwest. Its primary use is for unloading and loading a wide range of ammunition for all of the Services. The Island also hosts 3-4 annual military readiness training activities, with up to 1,200 participants per exercise from the Army, Coast Guard, Marines, and/or Canadian forces. NAVMAG Indian Island has 2716 acres of which 80% is forested. NAVMAG Indian Island was the test site for the NDCEE demonstration.

Safety for personnel and facilities

National security barrier

Mission readiness training support

Natural resources enhancement

Cultural resources protection

Naval Magazine Indian Island

Photos Courtesy of the U.S. Navy.