Spatial Decision Support System (SDSS) Framework

**Target Installations:** MCBCL and for disseminating models/tools to other installations

**DCERP Researcher/Developer:** Dr. Pat Halpin and Ben Donnelly (Duke University)

**Objectives for SDSS Framework:** The objectives for development of the SDSS framework (Research Project TSP-1) are to provide one-stop access to DCERP data, maps, models, and tools to facilitate use in planning and management decisions and to provide common mapping and data access functionality across the DCERP Team. At a basic level, the SDSS will be a web application similar to Google Maps, overlaying data on maps of the Camp Lejeune area, with browser-based tools to select areas and run analyses for practical decision making in base planning. The SDSS framework will provide a Web-based repository to document the scope of DCERP research. In addition, the framework will also be a hub providing access to DCERP research models that might not be easily integrated into a mapping application and for tools created by MCBCL and other DoD installations. Some tools will integrate tightly (such as how turn-by-turn driving directions naturally fit into popular online mappers.) We will directly integrate the Terrestrial Carbon Assessment Tool (Research Project T-3) and the RCW Decision-Support System (Research Project T-4) into the mapping environment. Other models, such as the New River Estuary Estuarine Simulation Model (Research Project TSP-2), will be brought into the framework as much as the underlying software allows, with spatially aware referrals to external hosting, if necessary. We will also directly integrate the ongoing greenness/vegetative change model as a test bed for the broader aggregation of research projects.

The Web-based version of the SDSS framework will include user interfaces accessible from within the SDSS framework and will be connected directly to data contained in MARDIS.

**Data needs:** The SDSS framework researchers developed a prototype SDSS framework during DCERP1 which will be transitioned into MARDIS during DCERP2. Additional tools will be uploaded as they are developed by other DCERP2 researchers.

**Deliver functional SDSS framework installed in MARDIS** – June 2014

**Deliver SDSS framework with all DCERP tools/models** – September 2017
Additional Information:

**Relationship between the SDSS framework, other DCERP modules, MCBCL end users, and external uses.**

**Technical Approach**

(3) Decision Support & Planning Tools

Access to applications hosted on the DSS website and on other sites

**Transitioning Information to Users**