USDA Forest Service
Natural Resource Management

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Topic: Natural Resource Manager (NRM) Field Sampled Vegetation (FSVeg) application and the Region 3 Four Forest Restoration Initiative (4FRI)

Summary: The overall goal of the 4FRI is to create landscape-scale restoration approaches that will provide for fuels reduction, forest health, and wildlife and plant diversity. A key objective is creating long term sustainable ecosystems. A need was identified to increase forest resiliency and sustainability, protect soil productivity, and improve soil and watershed function. Resiliency increases the ability of the ponderosa pine forest to survive natural disturbances such as fire, insect and disease, and climate change (FSM 2020). An analysis area of 2.4 million acres, south of the Grand Canyon and across the Mogollon Plateau, was identified using the FSVeg application. A total of 94% of the analysis area is on National Forest lands. Because of the large-scale nature of the restoration, implementation could lead to as many as 50,000 acres per year being treated over a 10-year period. These acres are above and beyond acres already being treated on an annual basis, due to the efficiencies gained through FSVeg and other NRM applications.

The first environmental assessment (EA) will assess about 750,000 acres of ponderosa pine vegetation on the Coconino and Kaibab forests. Potential treatment scenarios for the entire analysis area were also identified using FSVeg application. It was used to populate data for stands across the first EA project area. Plans are to do a similar analysis across the next project area which should be a similar size or larger. Common Stand Exam (CSE) data from FSVeg are archived to accurately capture the current landscape. This will help produce a better trend analysis. FSVeg also helped easily access and use historical data, which had been organized in separate databases or previously only been available in file cabinets. According to Neil McCusker the silviculturist for this initiative, "The ability to update and correct data using FSVeg is excellent. Use of this application saved us time and money identifying gaps in datasets. Using FSVeg gave us great confidence answering questions from the public interest groups".

Key Points: Field Sampled Vegetation (FSVeg) includes a database, national protocols for collecting Common Stand Exam (CSE) data, and an inter-face with data entry, data edit, data management, and analysis capabilities. FSVeg is designed to store field sampled vegetation data, including stand exams, permanent plot inventories, growth and yield plots, fuel data and forest health surveys. Efficiencies are gained, especially on large scale projects, using FSVeg.

Key Features: From CSE the application also allows Stand Density Index (SDI) and Quadratic Mean Diameter (QMD) to be easily be summarized and used for stand and subpopulations of interest; Digital images taken during the surveys can be stored within the database; 30 pre-defined reports are available, data can be extracted from tables or views with SQL queries, Excel or Access; and it includes a tool to extract data for use in the Forest Vegetation Simulator (FVS).