

Project Overview and General Methodology

The Forest Stewardship Program's Spatial Analysis Project (SAP) is built on consistent but flexible methodology for each state. The primary objective for SAP is to provide each State a tool to effectively, efficiently, and strategically deliver its Forest Stewardship Program to private forest landowners. Through the Forest Stewardship Program, private forest landowners are able to develop a forest stewardship plan that considers a full suite of natural resources on their property, considers their short and long term objectives for the property, and provides a schedule of possible activities and practices designed to meet those landowners' objectives.

Focus of the Analysis

Because SAP is intended to meet Forest Stewardship Program objectives, it focuses on all PRIVATE lands that could be eligible for the Forest Stewardship Program – those lands either currently forested or have the potential to be reforested or afforested in the future.

Areas Excluded from the Analysis

Any lands that are not eligible for Forest Stewardship Program benefits are excluded from analysis; therefore all public lands are excluded. The Forest Stewardship Program does not currently serve urban communities, excluding those areas as well from the analysis. All open water is also excluded from the SAP analysis.

SAP Components

SAP is comprised of two primary geospatial and tabular components –

1. The *statewide assessment* of all lands eligible for the Forest Stewardship Program takes into consideration the resource richness across the state, and known threats to the forest and other natural resources.
2. The *Stewardship Plan database* is an inventory of existing Forest Stewardship Plans that the State tracks through time. These multi-resource plans are prepared for private forest landowners and prescribe activities and practices that will help landowners achieve their objectives.

1. SAP Statewide Assessment

Common Datalayers

The statewide assessment is a compilation of GIS datalayers that address the resources, issues, and opportunities within a state. EVERY state is required to consider and include as available and applicable, twelve common datalayer themes deemed by the USDA Forest Service from a federal perspective to be of importance in determining resource richness, threats, and opportunities in identifying those lands that could potentially benefit from technical or financial assistance of the Forest Stewardship Program. The twelve common datalayer THEMES include:

Resource Richness Datalayer Themes:

- * Private Forestland
- * Forest Patch Size
- * Wetlands
- * Priority Watersheds
- * Slope
- * Proximity to Public Land
- * Threatened and Endangered Species
- * Riparian Areas
- * Public Water Supplies

Resource Threats Datalayer Themes:

- * Housing Density
- * Fire
- * Forests Pests

The Datalayer themes will be consistent; however the data sources available to address the themes will vary by State. SAP's intent is not to create new data, but to use readily-available, verifiable data to address the resources or threats. Some data sources are consistent across the United States, such as the National Land Cover Datalayer (NLCD) for land use and vegetation classes, but others are necessarily state-specific, such as the Natural Heritage databases addressing Threatened and Endangered Species. Minimally-acceptable scales for each of the common datalayers are prescribed by SAP guidance, however higher resolutions are acceptable.

Optional / Additional Datalayers

States have the option to add datalayers to their SAP statewide assessment as appropriate to respond to all state-specific issues, concerns or resource opportunities. There is no limit to the number of additional datalayers, if determined to be reliable, verifiable, and necessary to fully assess the areas of potential benefit to be derived from the Forest Stewardship Program in the State. States are encouraged to coordinate consideration and selection of additional datalayers with their State Forester's Stewardship Coordinating Committee.

Weighting of Datalayers

Of the twelve criteria or datalayers identified as contributing to the potential Stewardship Program benefit of a given piece of ground, some within a State will likely be more important than others. States have the option of weighting the twelve common datalayers and any additional datalayers by relative importance or critical need as they compile their composite map of Forest Stewardship Potential Benefits. The State has full discretion in determining methodology of the chosen weighting scheme, which is thoroughly documented in the state-specific methodology. They are encouraged to coordinate the weighting decisions with the State Forester's Stewardship Coordinating Committee within each state.

State Forester's Stewardship Coordinating Committee

The State Forester's Stewardship Coordinating Committee (SFSCC) is an integral part of the SAP process. They serve as the reviewing body, identifying possible additional datalayers, based on state-specific issues or resource opportunities. They also decide if the datalayers should be weighed based on relative resource importance

in the state. By doing this, although the states are required to include the same common datalayers, they have the ability to customize the assessment to their individual state needs and concerns. This SFSCC coordination occurs periodically throughout the SAP statewide assessment development.

2. SAP State Stewardship Plan Database

The second component of SAP is development and maintenance of the State's Stewardship Plan database. Currently, not all states have elected to develop their database for a number of reasons, primarily centered on budget. Building an electronic database from paper files is expensive and laborious. In many cases, States are building their Forest Stewardship Plan databases (Plan databases) over the course of several years, and as funding permits.

The Plan database includes spatial and tabular information on each tract listed within a Forest Stewardship Plan. Maps and attributes of the property, landowner objectives, recommended activities and practices through the planning horizon of the Stewardship Plan, and other pertinent information is included in the database. Originally, the Plan database for SAP was developed as an MS Access database and a joined shapefile database. Some States continue to use these database formats. However, as States have increased and updated their GIS capabilities, several have chosen to use a retrofitted and expanded geodatabase that combines the spatial and attribute information into one database. Regardless of the database used, only non-confidential information is shared with the USDA Forest Service.

Final Maps and Analyses – Combining the two SAP Components

The final maps combine datalayers of the Statewide Assessment (component #1) with the Stewardship Plan database (component #2) to assess existing Stewardship tracts and their relationship to the lands eligible for the Forest Stewardship Program, ranked by extent of potential benefit (high, medium, and low) from Forest Stewardship Program assistance. Analyses are included on appropriate Final Maps.

FINAL Spatial Analysis Project PRODUCTS

Upon completion of analysis and project development, each state will provide to the USDA Forest Service, the following:

1. Final Map Products and associated Analysis Tables
2. SAP Final Composite Datalayer of Stewardship Potential
3. Forest Stewardship Plan database – for those states completing FULL SAP Analysis
4. Metadata consistent with Federal Standards for all GIS datalayers delivered to FS
5. State-Specific Methodology

[Detailed guidance for Participating State Forestry Agencies \[see on-line resources\]](#)