

GYPSES

Adaptation of User Interface to ArcView (Spray Advisor)

FINAL PROGRESS REPORT

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Project Overview and Description:

The USDA Forest Service has coordinated the development of a wide array of computer-based tools used in support of pest control spraying operations. These tools provide guidance in planning and assessing the results of spray applications. The overall goal of this effort is to further the coordination of many of the previously developed tools into a comprehensive software package called the Spray Advisor.

As part of this effort, the Natural Resource Analysis Center (NRAC) at West Virginia University (WVU) has developed an adaptation of the U.S. Forest Service's Gypsy Moth Expert System (GYPSES) for use with Environmental Systems Research Institute's (ESRI's) ArcView GIS software platform. The Spray Advisor extension is delivered as an ArcView version 3.x extension file for use with Windows-based PCs. The Spray Advisor extension is intended for use in aerial spray program design and management.

Progress for Project Goals and Objectives:

Goal/Objective: Spray Advisor ArcView 3 Extension

The Spray Advisor ArcView 3 extension is now completed and has been employed in spray management programs throughout several states. User comments and suggestions have been continuously documented throughout the duration of the project. Updates have been made to improve the functionality and ease of use of the extension. The capabilities of the Spray Advisor ArcView 3 extension are documented in the Spray Advisor ArcView 3 Extension Technical Manual written as part of this project. The extension is made available to users through a website at the following URL:

<http://www.nrac.wvu.edu/sprayadvisor/>

Goal/Objective: Spray Advisor Extension and ArcView Training

NRAC has created a 2 day training course designed specifically for those interested in learning the basics of ArcView 3.x, while focusing on the use of the Spray Advisor ArcView 3 extension. The class consists of PowerPoint presentations followed by hands-on computer exercises that cover tasks typically encountered during the course of a spray management program. The class was given to almost 30 participants from 11 different states in February 2003 in Morgantown WV, and a future class date is planned for 2004.

Goal/Objective: Spray Advisor software development

The final portion of this project included the development of a stand-alone spray modeling software product (independent of ArcView) in cooperation with the Canadian Forest Service. The final product of collaboration between all entities will be a software interface entitled "Spray Advisor". The Spray Advisor software will enable users to take advantage of capabilities developed previously, including the ArcView Spray Advisor Extension developed by NRAC. NRAC provided programming support for this effort during the project time period.

Anticipated Future Activity:

The work covered under this project has been continued with Project # 10004389, Award 1002414R for the project time period of 10/01/03 to 9/30/05. The project continuation will allow the Natural Resource Analysis Center to build on past experience with the Spray Advisor project to further the completion of the Spray Advisor system within

ArcGIS 8. NRAC's work in ArcGIS for the Spray Advisor project will fall into two general areas: inclusion of various spray support models and tools into the ArcGIS 8 Spray Advisor system and incorporation of the existing ArcView 3.x Spray Advisor extension's capabilities.