Aerial Map Viewer

Protecting Forest Health Through Spatial Information

The Challenge

Each year staff from the Northeastern Area State and Private Forestry St. Paul Field Office conduct aerial pest-detection surveys on over 19 million acres of National Forest, National Park Service, Tribal, and other federal lands. Additionally, our state partners conduct aerial pest detection surveys on much of their state managed and privately held forest lands. While the results of these surveys are of great interest to land managers, survey data was underutilized as a management tool due to problems associated with the creation, duplication, and distribution of map products in a timely fashion and in a format that managers could easily use and manipulate.

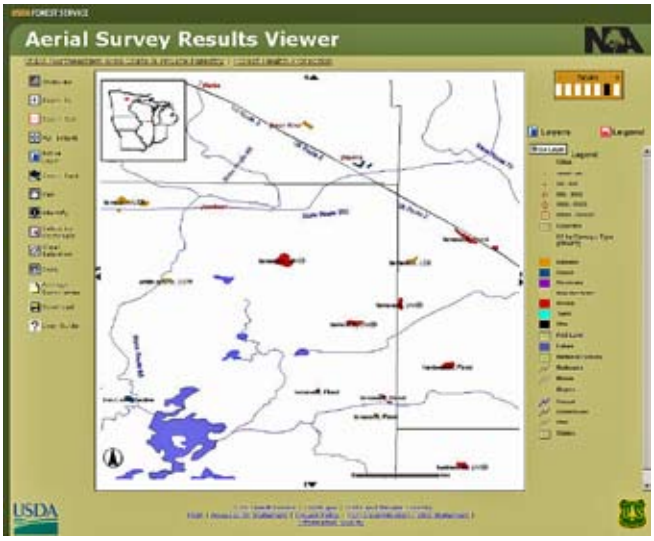
The Solution

To facilitate faster and wider distribution of survey results, we developed a web-based Aerial Survey Results Viewer designed to quickly display and distribute aerial survey damage data. Using the powerful ArcIMS platform, our web-based system allows any user with internet access to display, create, and print customized aerial survey damage maps by overlaying aerial survey results with a wide number of thematic layers and base maps. The Aerial Survey Results Viewer is available at:
http://www.na.fs.fed.us/ims/aerial/viewer.htm.

Resulting Benefits

This solution reduced the lag time required to convert survey data into maps from several months to as little as two weeks. Now land managers can quickly assess important forest health information in a more efficient manner. This has significant implications for the land manager's ability to proactively manage insects and diseases.

The visual display of damage polygons overlaid on a map base dramatizes the effect that forest disturbances have, not only on the forests and trees, but also on the people and communities living in effected areas.



Example of Forest Health Spatial Aerial Map Viewer

The web-based system allows for greater access to forest health information by state land managers, private landowners, and concerned citizens. The simple user-interface allows the user to perform data analysis without having to learn complex GIS software.

In addition to current year damage reporting, the web site also serves as a repository for historical forest damage data. This would allow comparisons of various years and support analyses that may, for example, document the spread of invasive forest insects or diseases which could be used to develop predictive models or aid in control efforts.

Sharing Success

Our efforts have increased awareness of our aerial survey efforts, which in turn increased demand for aerial survey information. It has also dramatized the power of imagery in presenting spatial data and has fostered an interest in our ability to utilize imagery to delivery other types of information.

More effective distribution and use of aerial survey information has been a recognized need by other Regions as well. This web-based viewer with analysis capability has raised the bar nationally and may serve as a prototype for other regional and national systems.

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