Using High Resolution Imagery for Fuels Mapping and CWPP Development

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This paper will review the technical methods employed for applying high resolution IKONOS imagery (Space Imaging, Thornton, CO) with image classification techniques to derive high resolution fuels maps in support of Wildland Urban Interface planning.

The lack of available accurate, up to date, detailed fuels information is a common problem when conducting community based WUI fire planning. The lack of accurate and current fuels data can restrict the ability of the fire planner to properly conduct a comprehensive assessment. Using high resolution imagery, acquired at 1m and 4m resolution, detailed and accurate vegetation and fuels maps can be created to support the fire planning process. Accurate fuels data is the single most important component of the WUI fire risk assessment process.

This paper will review the findings of a recent assessment that combined 4 meter image classification with field surveys to derive a fuels map. The project involved numerous field surveys to aid in the classification process including the development of an accuracy assessment. This paper will review the technical issues and solutions that resulted from the project including recommendations for refining future approaches. In addition, this paper will describe the utility of high resolution fuels data as part of the fire planning process, specifically the development of Community Wildfire Protection Plans (CWPP) and Operational Pre-Attack Plans for WUI communities. This project was a prototype for WUI planning. A demonstration of the assessment results, the CWPP and pre-attack plans, and GIS techniques for deploying the plans to interested parties will be provided. This session is a joint presentation between Space Imaging Solutions (Ann Arbor, MI) and Anchor Point Group (Boulder, CO).