

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Comparison of landscape patterns delineated by automated versus manual techniques for the Point Reyes National Seashore
Type of Project: Research
Funding Agency: National Park Service, Point Reyes National Seashore
Effective Dates: September 15, 2002 - May 30, 2004
Funding Amount: \$35,000
Investigators and Agency Representative: UNIVERSITY CONTACT: Dr. Roland Redmond, Wildlife Spatial Analysis Lab, University of Montana, 406-243-4906 NPS CONTACT: David Schirokauer, GIS Biologist, Point Reyes National Seashore, 415-464-5199
Project Abstract: The Wildlife Spatial Analysis Lab at The University of Montana (UM) will compare and evaluate landscape patterns derived from two different image segmentation methods applied to multi-spectral IKONOS, DAIS, and LandSat7 imagery with traditional photo-interpreted polygons for an approximately 4 quad (7.5") portion of the Point Reyes National Seashore (PORE) and Golden Gate National Recreation Area (GOGA). Future inventory, monitoring and management needs of the Point Reyes National Seashore and adjacent state parks will be enhanced by having accurate and detailed delineations of landscape units. Traditionally these units have been delineated from air photo interpretation - a method that is labor-intensive and subjective. Potentially suitable methods now exist to extract this sort of pattern information from high resolution satellite images much more quickly and efficiently. But it remains to be seen if these automated methods are able to capture the same level of detail and utility as photo interpretation. The goal of this research is to compare the results of at least two different image segmentation techniques against a set of photo-interpreted polygons for a portion of the Point Reyes National Seashore for which cloud-free IKONOS imagery is currently available.
Outcomes with completion dates: Draft publication manuscript - Dec 15, 2003 Publication manuscript - Feb 15, 2004
Keywords: Point Reyes National Seashore, Golden Gate National Recreation Area, satellite image evaluation, landscape patterns
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