

## John M. Lomas

### Professional Address

Kansas Applied Remote Sensing (KARS) Program  
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### Education

**University of Kansas** Lawrence KS  
BGS, Geography, May, 1994. GPA Overall: 3.69/4. Completed 34  
Hours of Graduate level courses in Geography/Geology with a 4.0 GPA.

### Honors

**Nelson Scholarship, Awarded to Outstanding Junior in Geography  
University of Kansas;** General Scholarship; Deans list all semesters;  
Geography Degree with Honors; National Council of Teachers of English  
Award.

### Experience 1/93 - Present

**Kansas Applied Remote Sensing Program, Lawrence, KS**  
*Research Assistant*

#### Current Responsibilities:

- Write models for GreenReport production employing altered AVHRR data formats
- Write models to automate Vegetation Condition map production
- Write DOS batch-file code to automate GreenReport file-naming output
- Write models to create and automate maps for new Alabama and Kansas web sites
- Write models to up-date GreenReport and Vegetation Condition data sets
- Write and up-date DOS batch-file code to automate GreenReport archiving
- Write and up-date DOS batch-file code to automate GreenReport web production
- Write and up-date PhotoShop batch-file code to automate GreenReport map and web production
- Produce a weekly set of maps derived from AVHRR Satellite data of vegetation condition and change for the conterminous U.S..
- Deliver map products to the commercial sector for distribution
- Produce demonstration products, and determine methods for production
- Create in-house and traveling exhibits
- Produce presentations, visuals, and graphics including posters, overheads, brochures, hand-outs, and web pages
- Maintain and post maps to KARS GreenReport external web site
- Maintain and post maps to KARS GreenReport internal web site
- Order satellite data on a regular basis and as needed

### Examples of Past Projects

- Built database containing 16 years of historical biweekly NDVI data for the conterminous U.S. in the development of a mapping product that illustrates vegetation/crop condition and change. Was made available to commercial vendors for test runs during the summer of 1995, and was sold on private computer networks starting in the spring of 1996. Have produced map sets on a weekly basis starting in 1997, and distributed them through electronic means and the Internet. Up-date data base and maintain an Internet site displaying maps from 1997 to present.

- Developed procedures to produce Sea Surface Temperature Maps from 5 band AVHRR imagery using an on-site satellite downlink. Distributed five maps of SST around the U.S. coast, which were distributed daily on a private computer network from 1997-1999
- Performed digitizing in ARC INFO and collected ground-truth for a land-cover land-use project for the Horseshoe Creek Watershed in North-Central KS. Built GIS coverage, did manual air-photo interpretation, created classification error tables, and produced maps.
- Participated in EPA Non-Point Source Pollution study. Collected spectral and biophysical data to determine land-use/ land cover in 3 Kansas watersheds. Transferred and compiled data for display in spreadsheet and graphic form. Aided in the analysis of corresponding LANDSAT and SPOT imagery. Performed classification analysis, generated land-use/land-cover statistics, used manual and screen digitizing techniques, and produced maps for field use.
- Participated in a project that documented land-use/land-cover change in western Kansas relating to loss of pheasant habitat due to increased use of herbicides on fallow land. Used four LANDSAT images to determine changing agricultural practices. Performed image classification, digitizing of study areas, and created spreadsheets containing temp/precip data from recording stations within the study areas for four 18-month periods. Study funded by Kansas Wildlife and Parks.
- Participated in a study to locate data sources needed to determine proximity of apple orchards to water bodies for a ten county area. The goal of the study, funded by Miles Inc./ Agriculture Division, was to conduct aquatic risk analysis from pesticide spraying within the orchards. Was responsible for locating analog and digital data sources for land-use and Hydrography in the study areas, documenting compatibility, format, availability, cost of the data, and writing the final report.
- Conducted a study for Miles Inc./Agriculture Division that determined proximity of water bodies to almond orchards in Kern County, Calif. Used digital data provided by Calif. EPA in ATLAS/GIS format to create buffer zones around water bodies, produce risk maps, and compile statistics.

**1989-1991      Kansas wildlife and Parks Pratt KS**

*Biologist Assistant*

Collected and recorded data in a 4 county area pertaining to fish populations in State and County lakes and reservoirs. Responsible for data compilation and record keeping. Prepared fish scale samples for analysis. Conducted water quality tests. Participated in lake stocking, and a 2-year project to establish aquatic macrophytes (waterlily and waterwillow) in Clinton Lake.

**Publications**

**Brown, J.C., W.E. Jepson, J.H. Kastens, J.M. Lomas, and K.P. Price (2007).**  
*High temporal resolution remote sensing of modern agricultural production and land modification in the Brazilian Amazon.* GIScience and Remote Sensing.

**Theresa M. Crooks, M. Jakubauskas, J. Whistler, A. Stewart, J. Lomas, E. Martinko, K. Price 2001.** *Meeting the challenge of outreach and technology transfer at the NASA Great Plains RESAC Proceedings*, ASPRS 2001 annual conference Nov, 2001 Denver CO

**Lomas, J.M., 2000.** *Development of a Value-Added, Remotely Sensed Product for Commercial Distribution* Proceedings, Second International Conference on Geospatial Information in Agriculture and Forestry 2000. January 10-12, 2000, Buena Vista, FL.

**Lomas, J.M., E.A. Martinko, K.P. Price, and D.L. Kastens. 1999.** *Agricultural applications: GreenReport - Vegetation Index Greenness Maps* (In) Remote Sensing Applications. Raytheon Publication. pp. 8-11

**Lomas, J.M., E.A. Martinko, K.P. Price, and D.L. Kastens. 1998.** *Satellite-derived vegetation maps for the agriculture and forestry: The GreenReport.* (In) Understanding our Changing Planet, Earth Science Enterprise 1998 Applications Fact Book. NASA Publication No. NP-1998-02-233-HQ. pp. 4-5.

**Lomas, J.M., E.A. Martinko, K.P. Price, and D.L. Kastens. 1998.** *Satellite-derived Sea Surface Temperature Maps for the Sport Fishing Industry.* (In) Understanding our Changing Planet, Earth Science Enterprise 1998 Applications Fact Book. NASA Publication No. NP-1998-02-233-HQ. pp. 22-23.

## **Skills**

Computer Software and Platforms Used:

ERDAS IMAGINE, ARC/INFO, NODDS (US NAVY DISTRIBUTED DATA SOFTWARE) NOAA SATELLITE ACTIVE ARCHIVE SYSTEM, IMAGE ALCHEMY, ATLAS/GIS, PHOTOSHOP, FREEHAND, POWERPOINT, WORD PERFECT, MICROSOFT WORD, PC WINDOWS NT-SUN/UNIX WORKSTATIONS