

**John Dunham**  
**Cartographic Services Manager – GIS Services Section**  
**Kansas Geological Survey – University of Kansas**  
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### **Graduate Education**

School	University of Kansas
Major Department	Geography
Degree	Doctor of Philosophy with honors, May, 1996
Grade Average	3.95/4.00
Dissertation title	“Comparison of seasonal nadir and off-nadir multispectral response patterns for six tallgrass prairie treatments in eastern Kansas”

School	University of Illinois at Urbana-Champaign
Major Department	Geography
Degree	Master of Science, August, 1986
Grade Average	3.25/4.00
Honors	Fred Foster Fellowship, 1984-85
Thesis title:	“Holocene climate change in the eastern United States and Canada inferred from lake sedimentation rates”

### **Undergraduate Education**

School	University of Kansas
Degree	Bachelor of Arts with Distinction and Departmental Honors in Geography, May, 1984
Grade Average	3.48/4.00
Honors	Kansas State Scholarship, 1981-84 Scholarship hall resident Gamma Theta Upsilon, geography honor society Honor Roll

### **Certification**

**GIS Professional (GISP), GIS Certification Institute (GISCI)**

### **Other Education**

Completed first-year requirements, University of Kansas School of Law, 1988-89

## **Current Position**

**Cartographic Services Manager** – GIS Services Section, Kansas Geological Survey, University of Kansas, 7/05 to present. Responsible for management of the daily operation of the cartographic services team and development of programs and capabilities for geologic and oil & gas map production and database and metadata development using GIS technologies, particularly the Esri GIS suite of products. Co-PI on the KGS StateMap program, responsible for all aspects of data compilation and annual geologic map and data deliverables for the project, as well as uploading digital versions of all new geologic map products into the national USGS database.

## **Previous Full-time Employment**

**GIS Specialist** – Data Access and Support Center (DASC), Kansas Geological Survey, University of Kansas, 7/99 to 7/05. Duties included database quality assurance, cartography, data creation, macro program development, and GIS education, using primarily Esri ArcGIS and ArcView software.

**GIS Analyst** – Office of the County Clerk, Johnson County, Kansas, 1/98 to 7/99. Duties included using UNIX Esri ARC/INFO Workstation GIS to prepare recorded plats for GIS entry, to quality-check GIS work of others in the Clerk's Office, and to create maps for use by office staff and outside customers. Additional responsibilities include maintenance of the department web page and a portion of the department's computer maintenance.

**GIS Specialist** – Environmental Studies and Permitting Division, Burns & McDonnell Engineering, Kansas City, Missouri, 6/97 to 1/98. Duties included assembling and editing GIS coverages, conducting GIS overlay analyses, editing and writing AMLs, and mapmaking, using Esri ARC/INFO Workstation and ArcView software on UNIX and Windows NT platforms.

**Intern** – Automated Information Mapping System (AIMS), Johnson County, Kansas Information Technology Services, 6/96 to 11/96. Derek Sherry, director. Worked on editing AIMS' street centerline address coverage (used for emergency services). Tasks included assigning address ranges to street segments and adding and correcting street segments, using Esri ARC/INFO Workstation GIS.

**Project Coordinator** – Illinois Streams Information System, Department of Urban and Regional Planning, University of Illinois, 8/86 to 8/88. Dr. Lewis Hopkins, principal investigator. Managed 15-20 graduate students per semester in collection of data for an Esri ARC/INFO Workstation-formatted geographic information system concerning Illinois' rivers and streams. The project involved extensive use of topographic maps and ancillary data.

## **Part-time employment**

**Geographer** – Kansas Applied Remote Sensing Program, University of Kansas, 2/97 to 6/97, 20 hr/week. Duties involved aspects of satellite-image analysis for land-use mapping, using workstation ERDAS Imagine. Supervisor: Dr. Steve Egbert.

## **Part-time employment (continued)**

**Engineering Technician** – Division of Water Resources, Kansas Department of Agriculture, 4/97 to 6/97, 20 hr/week. Duties involve preparation and update of maps and tables used throughout the office, using Esri GIS software. Supervisors: Mr. Lloyd Stullken and Mr. Brownie Wilson.

## **Student assistantships**

**Research Assistant** – Kansas Biological Survey/Kansas Applied Remote Sensing Program, 10/95 - 12/95. Worked under supervision of Jerry Whistler on assessment of shrike habitat near Ft. Riley, Kansas. Tasks included air photo interpretation and checking and correction of previously-interpreted areas using Esri ARC/INFO Workstation GIS.

**Research Assistant** – Kansas Biological Survey/Kansas Applied Remote Sensing Program, 5/95 to 9/95. Worked under supervision of Jerry Whistler on inventory of land cover in the Pracht Wetland near Wichita, Kansas. Tasks included conversion of air photos to digital format, orthorectification, interpretation of landcover classes, field checking, and data analysis and database development using Esri ARC/INFO Workstation GIS and ERDAS image processing software.

**Research Assistant** – Kansas Biological Survey/Kansas Applied Remote Sensing Program, 6/94 to 12/94. Worked under supervision of Jerry Whistler and Paul Liechti on inventory of vegetation along the Neosho River in Kansas. Tasks included air-photo slide interpretation, map analysis, field checking, and data analysis and database development using Esri ARC/INFO Workstation GIS on PC's and UNIX workstations.

**Research Assistant** – Kansas Biological Survey, 6/92 to 5/94. Worked under supervision of Dr. Kevin Price on EPA-funded project dealing with aspects of nonpoint-source pollution. Tasks included field sampling, image processing, and other data analysis using ERDAS, Esri ARC/INFO Workstation, QuattroPro, and SPSS.

**Teaching Assistant** – Kansas University Department of Geography, 8/91 to 5/92. Taught two sections per semester of Geog. 105, the introductory physical geography laboratory class. Tasks included lectures, demonstrations, tutoring, writing and administering tests and quizzes, and assigning grades.

**Teaching Assistant** – Kansas University Cartographic Service, Department of Geography, 8/90 to 8/91. Constructed maps and diagrams for clients, supervised other assistants and students working in the lab. Duties involved drafting, darkroom tasks, typesetting, and computer mapping.

**Assistant** – Kansas University Cartographic Service, 1/90 to 5/90. Constructed maps and diagrams for clients. Duties involved drafting, darkroom tasks, and typesetting.

**Research Assistant** – Professor William Baker, Department of Geography, University of Kansas, 8/89 to 5/90. Prepared tree cores, counted, and measured rings for two research projects. Also digitized data using UNIX GRASS software.

**Research Assistant** – Professor William Johnson, Department of Geography, University of Kansas, 6/89 to 8/89. Interpreted aerial photos, researched historic surveyors' notes, and drafted land-cover maps for project dealing with historic vegetation change along the Arkansas River in western Kansas.

## Student assistantships (continued)

**Teaching Assistant** – Department of Geography, University of Illinois, 8/84 to 5/86, excluding summers. Taught lab-discussion sections of introductory weather and climate class. Gave weekly oral presentation on lab exercise topics, prepared lab and lecture exams and quizzes, graded students' work, and assigned course grades.

## Awards and recognition

**2022 Esri International User Conference Map Gallery, International Cartographic Association (ICA) and International Map Industry Association (IMIA) Excellence in Cartography Award** for "*Surficial Geology of Miami County, Kansas*" (presentation details in the "Presentations at professional meetings" section). This award is given by a panel of judges from the two organizations. This map was one two selected from over 600 maps displayed – it is the highest honor a map can receive at the conference. I was responsible for the design, compilation, and cartographic work and editing of the geologists' work, assisted in the early stages of digital compilation and map layout by student employees.

<https://www.esri.com/en-us/about/events/uc/agenda/virtual-map-gallery#/submission-detail/6298ebe898d581c52a690352>

**2020 Friend of the Flint Hills**, as a member of the Flint Hills Maps & Education Program, an annual award given by the Flint Hills Discovery Center Foundation. I created a map of the Flint Hills for the program that was the centerpiece of their educational displays placed in Flint Hills schools at all levels, elementary to college.

**2018 Esri International User Conference Map Gallery, 3rd place, Large Format Printed Map category**, for "*Preliminary Surficial Geology of Miami County, Kansas*" (presentation details in the "Presentations at professional meetings" section). This award is based on voting by conference attendees viewing the maps in the Map Gallery exhibit. This map was one of hundreds in the category.

**2016 Esri International User Conference Map Gallery, International Cartographic Association (ICA) and International Map Industry Association (IMIA) Excellence in Cartography Award** for "*Surficial Geology of Morris County, Kansas*" (presentation details in the "Presentations at professional meetings" section). This award is given by a panel of judges from the two organizations. This map was one two selected from all the maps displayed – it is the highest honor a map can receive at the conference. I was responsible for the design, compilation, and cartographic work, assisted in the early stages of digital compilation and map layout by student employees.

**2016 Esri International User Conference Map Gallery, 2nd place, Large Format Printed Map category**, also for "*Surficial Geology of Morris County, Kansas*" (presentation details in the "Presentations at professional meetings" section). This award is based on voting by conference attendees viewing the maps in the Map Gallery exhibit. This map was one of hundreds in the category.

**2012 Esri International User Conference Cartography Special Interest Group Map Award** for "*Flint Hills Ecoregion*" (presentation details in the "Presentations at professional meetings" section). This group presents the award each year to the three maps from the Map Gallery exhibit that they deem "...the best examples of cartographic work from the Map Gallery at the Esri International User Conference."

**Publications (\*\* indicates a refereed publication)** An asterisk (\*) designates publication as an honor or form of recognition. Those published in Esri Map Books were exhibited in the prior year's Esri International User Conference's Map Gallery exhibit, then chosen for inclusion in the Map Book for the next year's conference. The other map was chosen as a noteworthy example of GIS use in state government.

**NOTE: in 2017, KGS StateMap Coordinator Greg Ludvigson instituted a map-authorship policy by which I became a co-author on all geologic maps, reflecting my involvement and importance to their completion. This policy was clarified and officially approved by KGS director Rolfe Mandel in 2019, but changed back for StateMap open-file reports beginning in 2022 due to program changes making these maps now drafts, lessening my involvement.**

- Bowen, M. W., Johnson, W. C., Klopfenstein, S. T., and Dunham, J. W., 2009. Developing a geospatial database of playas within the High Plains of Kansas: *Current Research in the Pleistocene*, v. 26, p. 191-193.\*\*
- Dunham, John W. (compiler), 2016. The Flint Hills with prairie areas (map). Kansas Geological Survey, Open-file Report 2016-1, scale 1:325,000.
- Dunham, John W. (compiler), 2012. Flint Hills Ecoregion (map). Kansas Geological Survey, Open-file Report 2012-6, scale 1:500,000.
- Dunham, John, 2012. Streams and rivers in the Flint Hills (map). *Symphony in the Flint Hills – Field Journal 2012, Vol. IV.*, p. 108. Strong City, Kansas: Symphony in the Flint Hills Press. 182 pp.
- Dunham, John, 2012. Headwater streams in Lyon County (map). *Symphony in the Flint Hills – Field Journal 2012, Vol. IV.*, p. 111. Strong City, Kansas: Symphony in the Flint Hills Press. 182 pp.
- Dunham, John, 2012. Defining the Flint Hills (map). *Symphony in the Flint Hills – Field Journal 2012, Vol. IV.*, p. 119. Strong City, Kansas: Symphony in the Flint Hills Press. 182 pp.
- Dunham, John, 2010. The topography and major rivers of the Kansas Flint Hills (map). *Symphony in the Flint Hills – Field Journal 2010, Vol. II.*, p. 90. Strong City, Kansas: Symphony in the Flint Hills Press. 186 pp.
- Dunham, John W., Anthony L. Layzell, K. David Newell, Stephan C. Oborny, and Rolfe D. Mandel, 2023. Surficial geology of Miami County, Kansas (map). *Esri Map Book*, Vol. 38, in press. Redlands, California: Esri Press. \*
- Dunham, John W., Anthony L. Layzell, Rolfe D. Mandel, and K. David Newell, 2019. Preliminary surficial geology of Miami County, Kansas (map). *Esri Map Book*, Vol. 34, pp. 10-11. Redlands, California: Esri Press. 179 pp. \*
- Dunham, John, Robert Sawin, Ronald West, Richard Jarvis, and R. Zane Price, 2017. Surficial geology of Morris County, Kansas (map). *Esri Map Book*, Vol. 32, pp. 10-11. Redlands, California: Esri Press. 192 pp. \*
- Dunham, John, Ronald West, Robert Sawin, Lawrence Brady, Ian Ramirez, Christopher Bieker, and Darren Haag, 2010. Surficial geology of Crawford County, Kansas (map). *Esri Map Book*, Vol. 25, pp. 84-85. Redlands, California: Esri Press. 120 pp. \*
- Dunham, John, Robert Sawin, Nathaniel Haas, and Darren Haag, 2009. Surficial geology of the Tallgrass Prairie National Preserve, Chase County, Kansas (map). *Esri Map Book*, Vol. 24, p. 15. Redlands, California: Esri Press. 120 pp.\*

## Publications (continued)

- Dunham, John W. and Jeremy W. Bartley, 2006. *Comparison of calculated state center points for Kansas* (map). Open-file Report 2006-10. Lawrence, Kansas: Kansas Geological Survey. 1 p.
- Dunham, John, 2005. 2004 Kansas house districts and major river basins (map). *GIS in State Government*, Vol. 1, p. 30. Redlands, California: Esri Press. 88 pp.\*
- Dunham, John W., and Kevin P. Price, 1996. Comparison of nadir and off-nadir multispectral response patterns for six tallgrass prairie treatments in eastern Kansas. *Photogrammetric Engineering and Remote Sensing* 62(8): 961-967.\*\*
- Dunham, John W. and Kevin P. Price, 1993. Analysis of nadir and off-nadir hyperspectral and sunfleck measurements for six prairie treatments in Kansas. *ACSM/ASPRS Annual Convention and Exposition Technical Papers*, Vol. 2: 54-65.
- Dunham, John W., 1986. Holocene climate change in the eastern U.S. and Canada as inferred from lake sedimentation rates (abstract only). *Program and Abstracts of the Ninth Biennial Meeting of the American Quaternary Association*, p. 131.
- Johnson, W. C., Schlagel, N. A., and Dunham, J. W., 2017, Preliminary surficial geology of the Little River quadrangle and the Rice County portion of the Crawford quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-21, scale 1:24,000, unpublished.
- Johnson, W. C., Schlagel, N. A., and Dunham, J. W., 2017, Preliminary surficial geology of the Lyons SE quadrangle, Rice County, Kansas: Kansas Geological Survey, Open-File Report 2017-22, scale 1:24,000, unpublished.
- Johnson, W. C., Schlagel, N. A., and Dunham, J. W., 2017, Preliminary surficial geology of the Rice County portion of the Windom SW quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-23, scale 1:24,000, unpublished.
- Johnson, W. C., Schlagel, N. A., and Dunham, J. W., 2017, Preliminary surficial geology of the Windom quadrangle and the Rice County portion of the Langley quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-24, scale 1:24,000, unpublished.
- Johnson, W. C., Schlagel, N. A., and Dunham, J. W., 2018, Preliminary surficial geology of the Arkansas City quadrangle and the Cowley County portion of the Geuda Springs quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2018-3, scale 1:24,000, unpublished.
- Johnson, W. C., Schlagel, N. A., and Dunham, J. W., 2018, Preliminary surficial geology of the Akron quadrangle, Cowley County, Kansas: Kansas Geological Survey, Open-File Report 2018-4, scale 1:24,000, unpublished.
- Johnson, W. C., Schlagel, N. A., and Dunham, J. W., 2018, Preliminary surficial geology of the Hackney quadrangle, Cowley County, Kansas: Kansas Geological Survey, Open-File Report 2018-5, scale 1:24,000, unpublished.
- Layzell, A. L., and Dunham, J. W., 2018, Preliminary surficial geology of the Adamsville quadrangle, Sumner and Cowley counties, Kansas: Kansas Geological Survey, Open-File Report 2018-8, scale 1:24,000, unpublished.

## Publications (continued)

- Layzell, A. L., and Dunham, J. W., 2018, Preliminary surficial geology of the Oxford quadrangle, Sumner and Cowley counties, Kansas: Kansas Geological Survey, Open-File Report 2018-9, scale 1:24,000, unpublished.
- Layzell, A. L., and Dunham, J. W., 2018, Preliminary surficial geology of the South Haven quadrangle, Sumner County, Kansas: Kansas Geological Survey, Open-File Report 2018-6, scale 1:24,000, unpublished.
- Layzell, A. L., and Dunham, J. W., 2019, Preliminary surficial geology of the Caldwell quadrangle, Sumner County, Kansas: Kansas Geological Survey, Open-File Report 2019-8, scale 1:24,000, unpublished.
- Layzell, A. L., and Dunham, J. W., 2019, Preliminary surficial geology of the Caldwell NW quadrangle, Sumner County, Kansas: Kansas Geological Survey, Open-File Report 2019-9, scale 1:24,000, unpublished.
- Layzell, A. L., and Dunham, J. W., 2019, Preliminary surficial geology of the Perth quadrangle, Sumner County, Kansas: Kansas Geological Survey, Open-File Report 2019-10, scale 1:24,000, unpublished.
- Layzell, A. L., and Dunham, J. W., 2020, Preliminary surficial geology of the Dalton quadrangle, Sumner County, Kansas: Kansas Geological Survey, Open-file Report 2020-4, scale 1:24,000, unpublished.
- Layzell, A. L., and Dunham, J. W., 2020, Preliminary surficial geology of the Sumner County portion of the Belle Plaine quadrangle, Kansas: Kansas Geological Survey, Open-file Report 2020-5, scale 1:24,000, unpublished.
- Layzell, A. L., and Dunham, J. W., 2020, Preliminary surficial geology of the Sumner County portion of the Zyba quadrangle, Kansas: Kansas Geological Survey, Open-file Report 2020-6, scale 1:24,000, unpublished.
- Liechti, Paul M., Jerry L. Whistler, Ann Clements, and John Dunham, 1995. *Neosho Vegetation Inventory Study - Final Report*. Report No. 66. Lawrence, Kansas: Kansas Biological Survey. 22 pp.
- Mandel, R. S., Newell, K. D., Layzell, A. N., and Dunham, J. W., 2017, Preliminary surficial geology of Miami County, Kansas: Kansas Geological Survey, Open-File Report 2017-20, scale 1:50,000, unpublished.
- Parcell, W. C., Dinkel, G. L., Post, S. D., and Dunham, J. W., 2017, Preliminary surficial geology of the Sedgwick County portion of the Bentley quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-25, scale 1:24,000, unpublished.
- Parcell, W. C., Dinkel, G. L., Post, S. D., and Dunham, J. W., 2017, Preliminary surficial geology of the Sedgwick County portions of the Mount Hope and Patterson quadrangles, Kansas: Kansas Geological Survey, Open-File Report 2017-26, scale 1:24,000, unpublished.
- Parcell, W. C., Dinkel, G. L., Post, S. D., and Dunham, J. W., 2017, Preliminary surficial geology of the Sedgwick County portion of the Sedgwick quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-27, scale 1:24,000, unpublished.
- Parcell, W. C., Dinkel, G. L., Post, S. D., and Dunham, J. W., 2017, Preliminary surficial geology of the Sedgwick County portion of the Sedgwick NE quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-28, scale 1:24,000, unpublished.

## **Publications (continued)**

- Parcell, W. C., Dinkel, G. L., Post, S. D., and Dunham, J. W., 2017, Preliminary surficial geology of the Sedgwick County portion of the Whitewater quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-29, scale 1:24,000, unpublished.
- Parcell, W. C., Dinkel, G. L., Post, S. D., and Dunham, J. W., 2018, Preliminary surficial geology of the Sedgwick County portion of the Andover quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2018-10, scale 1:24,000, unpublished.
- Parcell, W. C., Dinkel, G. L., Post, S. D., and Dunham, J. W., 2018, Preliminary surficial geology of the Wichita East quadrangle, Sedgwick County, Kansas: Kansas Geological Survey, Open-File Report 2018-11, scale 1:24,000, unpublished.
- Parcell, W. C., Moots, W. E., and Dunham, J. W., 2020, Preliminary surficial geology of the Sedgwick County portion of the Garden Plain quadrangle, Kansas: Kansas Geological Survey, Open-file Report 2020-8, scale 1:24,000, unpublished.
- Parcell, W. C., Swanson, W. J., Wernert, J. A., and Dunham, J. W., 2019, Preliminary surficial geology of the Goddard quadrangle, Sedgwick County, Kansas: Kansas Geological Survey, Open-File Report 2019-11, scale 1:24,000, unpublished.
- Parcell, W. C., Swanson, W. J., Wernert, J. A., and Dunham, J. W., 2019, Preliminary surficial geology of the Wichita West quadrangle, Sedgwick County, Kansas: Kansas Geological Survey, Open-File Report 2019-12, scale 1:24,000, unpublished.
- Sawin, R. S., and Dunham, J. W., 2017, Preliminary surficial geology of the Lincoln County portion of the Ada quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-11, scale 1:24,000, unpublished.
- Sawin, R. S., and Dunham, J. W., 2017, Preliminary surficial geology of the Lincoln County portion of the Ash Grove quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-12, scale 1:24,000, unpublished.
- Sawin, R. S., and Dunham, J. W., 2017, Preliminary surficial geology of the Lincoln County portion of the Barnard quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-13, scale 1:24,000, unpublished.
- Sawin, R. S., and Dunham, J. W., 2017, Preliminary surficial geology of the Lincoln County portion of the Hunter quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-14, scale 1:24,000, unpublished.
- Sawin, R. S., and Dunham, J. W., 2017, Preliminary surficial geology of the Lincoln County portion of the Lincoln NW quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-15, scale 1:24,000, unpublished.
- Sawin, R. S., and Dunham, J. W., 2017, Preliminary surficial geology of the Lincoln County portion of the Tescott quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-16, scale 1:24,000, unpublished.
- Sawin, R. S., and Dunham, J. W., 2017, Preliminary surficial geology of the Lincoln County portions of the Wilson NW and Wilson quadrangles, Kansas: Kansas Geological Survey, Open-File Report 2017-17, scale 1:24,000, unpublished.
- Sawin, R. S., and Dunham, J. W., 2017, Preliminary surficial geology of the Shady Bend quadrangle, Lincoln County, Kansas: Kansas Geological Survey, Open-File Report 2017-18, scale 1:24,000, unpublished.



## Publications (continued)

- Sawin, R. S., and Dunham, J. W., 2017, Preliminary surficial geology of the Wilson NE quadrangle and the Lincoln County portion of the Black Wolf quadrangle, Kansas: Kansas Geological Survey, Open-File Report 2017-19, scale 1:24,000, unpublished.
- Sawin, R. S., Evans, C. S., and Dunham, J. W., 2015. Kansas Geologic Maps. Kansas Geological Survey, Public Information Circular 38, 6 p.
- Smith, J. J., and Dunham, J. W., 2020, Preliminary surficial geology of the Bluff City NW quadrangle, Harper County, Kansas: Kansas Geological Survey, Open-file Report 2020-9, scale 1:24,000, unpublished.
- Smith, J. J., and Dunham, J. W., 2020, Preliminary surficial geology of the Danville quadrangle and the Harper County portions of the Adams and Norwich quadrangles, Kansas: Kansas Geological Survey, Open-file Report 2020-10, scale 1:24,000, unpublished.
- Smith, J. J., and Dunham, J. W., 2020, Preliminary surficial geology of the New Salem quadrangle, Cowley County, Kansas: Kansas Geological Survey, Open-file Report 2020-11, scale 1:24,000, unpublished.
- Smith, J. J., and Dunham, J. W., 2020, Preliminary surficial geology of the Winfield quadrangle, Cowley County, Kansas: Kansas Geological Survey, Open-file Report 2020-12, scale 1:24,000, unpublished.
- Smith, J. J., and Dunham, J. W., 2019, Preliminary surficial geology of the Argonia quadrangle, Harper and Sumner counties, Kansas: Kansas Geological Survey, Open-File Report 2019-13, scale 1:24,000, unpublished.
- Smith, J. J., and Dunham, J. W., 2019, Preliminary surficial geology of the Freeport quadrangle, Harper and Sumner counties, Kansas: Kansas Geological Survey, Open-File Report 2019-14, scale 1:24,000, unpublished.
- Smith, J. J., and Dunham, J. W., 2019, Preliminary surficial geology of the Silverdale quadrangle, Cowley County, Kansas: Kansas Geological Survey, Open-File Report 2019-15, scale 1:24,000, unpublished.
- Smith, J. J., and Dunham, J. W., 2018, Preliminary surficial geology of the Bluff City East quadrangle, Harper and Sumner counties, Kansas: Kansas Geological Survey, Open-File Report 2018-12, scale 1:24,000, unpublished.
- Smith, J. J., and Dunham, J. W., 2018, Preliminary surficial geology of the Bluff City West quadrangle, Harper County, Kansas: Kansas Geological Survey, Open-File Report 2018-13, scale 1:24,000, unpublished.
- Smith, J. J., and Dunham, J. W., 2018, Preliminary surficial geology of the Spring quadrangle, Harper County, Kansas: Kansas Geological Survey, Open-File Report 2018-14, scale 1:24,000, unpublished.
- Whistler, Jerry L. and John Dunham, 1995. *Pracht Wetland Landcover Inventory – Final Report*. Report No. 95-1. Lawrence, Kansas: Kansas Applied Remote Sensing Program. 33 pp.

## Historical printed materials digitally prepared and enhanced for publication

Three figures appearing in *Symphony in the Flint Hills – Field Journal 2013, Vol. V*.  
Cottonwood Falls, Kansas: Symphony in the Flint Hills Press. 170 pp:

“Map of the Kansas Territory – Enlarged from Map of the Corps of Topographical Engineers, Published in 1850” (pp. 2-3). Published in *Early Kansas – An Historical Atlas* by Ralph and Monte Preston (digital versions of the original map were unavailable), I created an antiqued, rough-edge version of the map from the original black & white scanned version from the publication

“An Army Train Crossing the Plains” (p. 40). This illustration, appearing on a page from an original April 24, 1858 copy of *Harper’s Weekly*, was professionally hand-colored by a New York City firm and shipped to me. I then scanned the original and digitally cropped the image and adjusted and enhanced the colors to best suit publication needs.

“Crayon Drawings by Robert Cotton – Insects in Kansas, *Report of the Kansas State Board of Agriculture, June 1943*” (p. 152). This illustration of examples of ten grasshopper species was a page from the original publication. I scanned the original and digitally cropped the image and adjusted and enhanced the colors to best suit publication needs.

## Presentations at professional meetings

- “Surficial Geology of Miami County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 11, 2022. (NOTE: I was unable to attend the conference, but the map was still displayed in the Map Gallery exhibit).
- “Surficial Geology of Bourbon County, Kansas.” Virtual Map Gallery (poster) presentation, Esri International User Conference, July 12-14, 2021.  
<https://www.esri.com/en-us/about/events/uc/plan/virtual-map-gallery#/submission-detail/606e306968077000191da26d>
- “Surficial Geology of Bourbon County, Kansas.” Map Blast (online digital showcase), Digital Mapping Techniques (DMT) AASG-USGS virtual Annual Workshop, June 8, 2020.
- “Oil and Gas Fields of Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 8, 2019.
- “Preliminary Surficial Geology of the Bluff City West Quadrangle, Harper County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 8, 2019.
- “Examples of new and legacy NCGMP09/GeMS-compliant geodatabases from Kansas.” Digital Mapping Techniques (DMT) AASG-USGS Annual Workshop, Montana Technological University, Butte, MT, May 21, 2019.
- “Preliminary Surficial Geology of the Lyons SE Quadrangle, Rice County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 9, 2018.
- “Preliminary Surficial Geology of Miami County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 9, 2018.
- “Using Maps in Schools to Create a Sense of Place and Promote Stewardship.” Presentation with Anne Wilson and Brian Obermeyer, Kansas Association of Mappers Annual Conference, Lawrence, KS, October 18, 2017.
- “Preliminary Surficial Geology of the Lincoln Quadrangle, Lincoln County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 10, 2017.

## **Presentations at professional meetings (continued)**

- “Preliminary Surficial Geology of the Louisburg Quadrangle, Miami County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 10, 2017.
- “Surficial Geology of Morris County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, June 27, 2016.
- “‘You are Here’ – Flint Hills Maps & Education Program.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, June 27, 2016.
- “Surficial Geology of Dickinson County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 20, 2015.
- “Surficial Geology of Pawnee County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 20, 2015.
- “Extracting GIS data from US Topo PDFs using Adobe Illustrator with Avenza MAPublisher.” Digital Mapping Techniques (DMT) AASG-USGS Annual Workshop, University of Delaware, Newark, DE, June 2, 2014.
- “Surficial Geology of Hodgeman County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 8, 2013.
- “Using ArcScan in Geologic Mapping to Convert Hand-drawn Geologic Contacts.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 8, 2013.
- “Scanning and digital cleanup of out-of-print maps.” Digital Mapping Techniques (DMT) AASG-USGS Annual Workshop, Colorado School of Mines, Golden, CO, June 3, 2013.
- “Flint Hills Ecoregion.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 23, 2012.
- “Surficial Geology of Saline County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 23, 2012.
- “Surficial Geology of Saline County, Kansas.” Electronic poster presentation, 13th Biennial MidAmerica GIS Symposium, MidAmerica GIS Consortium (MAGIC), Kansas City, MO, April 23, 2012.
- “Surficial Geology of Geary County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 11, 2011.
- “Surficial Geology of Crawford County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, July 13, 2009. (NOTE: I was unable to attend the conference, but the map was still displayed in the Map Gallery exhibit).
- “GIS conversion of Kansas historical county geology maps.” (Co-author Darren J. Haag.) Esri International User Conference, San Diego, CA, August 7, 2008.
- “Surficial Geology of the Tallgrass Prairie National Preserve, Chase County, Kansas.” Map Gallery (poster) presentation, Esri International User Conference, San Diego, CA, August 4, 2008.
- “A new surficial geology map of Kansas.” Poster presentation, 11th Biennial MidAmerica GIS Symposium, MidAmerica GIS Consortium (MAGIC), Kansas City, MO, April 22, 2008.

### **Presentations at professional meetings (continued)**

- “Metadata toolbox.” MidAmerica GIS Symposium (MAGIC) Biennial Conference, Kansas City, MO, April 21, 2004.
- “Updating digital orthophotography for the state of Kansas” (co presenter: Krysia Sapeta, Sanborn), Esri International User Conference, San Diego, CA, July 8, 2003.
- “2002 statewide DOQQs.” Kansas Association of Mappers Annual Conference, Wichita, KS, October 2 & 3, 2002.
- “Introduction to DASC” presentation, including discussion of “Spatially enabling the Kansas e-government enterprise.” 83rd Annual Kansas Transportation Engineering Conference, Manhattan, KS, April 16, 2002.
- “Seasonal multispectral responses of tallgrass prairie under different management practices.” Association of American Geographers Annual Meeting, Dallas, TX, April 4, 1997.
- “Spectral reflectance responses of prairie treatments under different management practices.” Association of American Geographers Annual Meeting, Chicago, IL, March 18, 1995.
- “Hyperspectral characterization of prairie treatments using multiple-view angle multitemporal measurements.” Association of American Geographers Annual Meeting, San Francisco, CA, March 30, 1994; Kansas Academy of Science Annual Meeting, Topeka, KS, April 8, 1994.
- “Analysis of nadir and off-nadir hyperspectral and sunfleck measurements for six prairie treatments in Kansas.” 1993 ACSM/ASPRS Annual Convention and Exposition, New Orleans, LA, February 16, 1993.

### **Presentations authored or co-authored, presented by others at professional meetings**

- “Role of LiDAR-derived stream network datasets.” Hosseini, Atefeh, John Dunham, and Elizabeth Smith; 2019 Kansas Association of Mappers (KAM) Conference, Lawrence, KS, October 17, 2019.
- “Preliminary surficial geologic map of Miami County, Kansas.” Layzell, Anthony L., K. David Newell, Rolfe D. Mandel, and John W. Dunham; poster presented by Anthony L. Layzell, Geological Society of America 2019 Joint 53rd South-Central/53rd North-Central/71st Rocky Mountain Section Meeting, Manhattan, KS, March 26, 2019.
- “Geologic Mapping of Rice County, Kansas.” Johnson, William C., John W. Dunham, and Sarah F. Child; poster presented by William C. Johnson, Geological Society of America 2016 Annual Meeting, Denver, CO, September 25-28, 2016.
- “Applying ArcScan in geologic mapping to convert hand-drawn geologic contacts.” Dunham, John W., Aaron N. Koop, and William C. Johnson; poster presented by William C. Johnson, Geological Society of America 2013 Annual Meeting, Denver, CO, October 28, 2013.
- “Surficial Geology of Hodgeman County, Kansas.” Woodburn, Terri L., William C. Johnson, John W. Dunham, and Charity M. Phillips-Lander; poster presented by Terri L. Woodburn, Geological Society of America 2012 Annual Meeting, Charlotte, NC, November 5, 2012.

## **Presentations authored or co-authored, presented by others at professional meetings (continued)**

- “Kansas geologic mapping – more than just paper maps.” Woodburn, Terri L., William C. Johnson, John W. Dunham, and Christopher R. Bieker; poster presented by Terri L. Woodburn, Geological Society of America 2007 Annual Meeting, Denver, CO, October 28, 2007.
- “Innovations in current Kansas geologic mapping.” (author; co-authors Gerald W. Wright III, Jorgina A. Ross, and William C. Johnson; poster presented by W.C. Johnson, Geological Society of America 2005 Annual Meeting, Salt Lake City, UT, October 16, 2005.

## **Educational presentations and courses taught**

- Geologic Map Schema (GeMS) workshop for KGS geologic mapping staff, Lawrence, KS, October 25, 2021.
- “Geologic mapping at the Kansas Geological Survey.” Kansas Geologic Mapping Advisory Committee semiannual meeting, Lawrence, KS, May 17, 2017
- “New statewide geology map.” Geological Survey Advisory Council semiannual meeting, Lawrence, KS, March 4, 2008.
- “Geologic mapping at the Kansas Geological Survey.” Kansas GIS Policy Board bimonthly meeting, Topeka, KS, September 22, 2006; Geological Survey Advisory Council semiannual meeting, Lawrence, KS, February 9, 2007.
- “Flint Hills mapping.” Given as part of Kansas Energy Council’s public discussion of Gov. Sebelius’ Flint Hills wind-energy proposals. This presentation illustrated DASC’s support role in disseminating information necessary in the wind energy debate, including hard-copy and internet map creation. Nichols Hall, University of Kansas, Lawrence, November 16, 2004
- “ArcView for the uninitiated” (with Ken Nelson), part of “Take Your Kids to Work Day,” presented at KGS for children of KGS staff, April 16, 2002; April 23, 2003.
- Geography 558 (Intermediate GIS), Department of Geography, University of Kansas, Spring, 2001 and Spring, 2002 semesters. 4-credit upper/graduate level class – responsible for lectures and overseeing lab teaching assistant.
- “Metadata tools” in DASC’s “Don’t duck metadata” short course presenting basics of spatial metadata development. Lawrence, KS, May 10, 2000; Salina, KS, July 19, 2000; Wichita, KS, September 6, 2000; Topeka, KS, September 28, 2000.
- “GIS Day,” introducing students to use of GIS in geography, Sunset Hill Elementary School, Lawrence, KS, November 19, 1999; Banneker Elementary Science & Technology Magnet School, Kansas City Kansas, November 15, 2000.
- “Introduction to geography and mapping” in “Introduction to GIS” short course for secondary-school educators sponsored by the Kansas City, Kansas Public Schools Summer Institute, Harmon High School, Kansas City KS, August 9, 1999.
- “Introduction to DASC” presentation outlining history and work of DASC, data available, and how to access it. Advanced GIS class, University of Kansas, November 2, 2000;
- Advanced GIS class, Kansas State University, November 16, 1999; Intermediate GIS class, Kansas State University, October 22, 2001.

## Other professional activities

Represented KGS at the annual USGS-Association of American State Geologists (AASG) Digital Mapping Techniques (DMT) conferences listed below:

2007: Columbus, OH, Ohio Geological Survey, Ohio State University, June 11-14;  
2011: Williamsburg, VA, Virginia Division of Geology and Mineral Resources, College of William & Mary, May 22-25;  
2012: Champaign, IL, Illinois State Geological Survey, University of Illinois, May 20-23;  
2013: Golden, CO, Colorado Geological Survey, Colorado School of Mines, June 2-5;  
2014: Newark, DE, Delaware Geological Survey, University of Delaware, June 1-4;  
2015: Salt Lake City, UT, Utah Geological Survey, University of Utah, May 17-20;  
2016: Tallahassee, FL, Florida Geological Survey, University of Florida, May 22-25;  
2017: Minneapolis, MN, Minnesota Geological Survey, University of Minnesota, May 21-24;  
2018: Lexington, KY, Kentucky Geological Survey, University of Kentucky, May 20-23;  
2019: Butte, MT, Montana Bureau of Mines and Geology, Montana Tech, May 19-22;  
2020: Virtual DMT, afternoons June 8-10; “DMT Lite,” afternoon December 8;  
2021: Virtual DMT, afternoons June 7-10; “DMT Lite,” afternoons December 6-7;  
2022: Rolla, MO, Missouri University of Science and Technology, May 21-25.

2nd National Cooperative Geologic Mapping Program (NCGMP) Workshop:  
“Implementing the US GeoFramework Initiative,” including serving on one of the “NGMDB—foundational data and other considerations” writing teams, April 27-29, 2021. “Invitation-only” Zoom workshop that Dave Soller of USGS asked me to attend.

Contributor, U.S. Geological Survey National Cooperative Geologic Mapping Program, 2020, GeMS (Geologic Map Schema)—A Standard Format for the Digital Publication of Geologic Maps: U.S. Department of the Interior-U.S. Geological Survey, Techniques and Methods 11-B10.

Member, USGS-AASG National Cooperative Geologic Mapping Program (NCGMP) Geologic Map Schema (GeMS) Working Group, which will determine what constitutes compliance in implementation of this new standard for USGS StateMap deliverables, including level of metadata to be provided. Since the method of implementation of a GeMS requirement could make major changes to our StateMap workflow, I was very happy to be chosen for this committee.

Member, USGS-AASG National Geologic Map Database (NGMDB) Working Group. The goal is to determine the path forward for this online geologic database of GIS and other data, as well as online maps, from USGS and the states.

Member, USGS-AASG Digital Mapping Techniques (DMT) GeMS Working Group completed revision of version 1.1 to version 2.0 of the national standard (known as Geologic Map Schema, or GeMS) for digital geologic map production, for easier geologic data sharing from state to state.

A/V and Computer Chair, Geological Society of America South-Central Section and North-Central Section Meeting, University of Kansas, Lawrence, KS, April 11-13, 2007.

Session moderator, “Data warehousing: legal issues and liabilities.” MidAmerica GIS Symposium (MAGIC) Biennial Conference, Kansas City, MO, April 20, 2004.

Currently serving on Ph.D. dissertation committee of Atefeh Hosseini, my former GRA and a student in KU Civil Engineering.

Served on thesis committee of Peder Sandhei (M.A. 2003), an advisee of Dr. Bob Buddemeier of KGS.

## Other professional activities (continued)

KGS representative at USGS EROS Data Center AASG remote sensing workshop for state geological surveys in which NASA representatives provided an introduction to remote sensing concepts and applications. The workshop introduced material relevant to an RFP later sent to state surveys regarding pilot projects involving the use of remotely sensed data. Sioux Falls, SD, May 15-16, 2002.

Session Chair, “Multispectral Remote Sensing for Environmental Monitoring II.”  
Association of American Geographers Annual Meeting, Chicago, IL, March 16, 1995.

Session Chair, “Remote Sensing Applications.” Association of American Geographers  
Annual Meeting, San Francisco, CA, March 31, 1994.

Student Director, Remote Sensing Specialty Group, Association of American Geographers,  
1995-1996 academic year.

President, University of Kansas Geography Graduate Student Organization, 1990-91  
academic year.

## Highlights of technical proficiencies

**Esri ArcGIS suite:** Extensive knowledge of and experience in ArcGIS, including ArcMap, ArcCatalog, and other tools and extensions, for vector and raster data creation and editing, mapmaking, data archiving, metadata creation, and other tasks. Basic knowledge of and experience in ArcGIS Pro, ModelBuilder, Python, and ArcPy;

**Blue Marble Geographics Global Mapper:** Proficient in basic Global Mapper functions; I use this GIS software for several tasks that it performs better or more easily than the ArcGIS suite.

**Golden Software Didger:** Proficient in basic tasks of this software used for data transformation tasks such as raster-to-vector conversion.

**Microsoft Office:** Proficient in MS-Office, especially Word, Excel, Access, and PowerPoint;

**Adobe Creative Suite:** Proficient in Adobe Acrobat, Illustrator, InDesign, and Photoshop, with some experience in other programs;

**Hewlett-Packard plotters:** Proficient at all aspects of using HP plotter (here, a 60” DesignJet Z6800ps) for plotting large-format color documents, including paper selection and loading and associated ink settings, color adjustments, and software management, including firmware updates, as well as Onyx RIP Center software, used for consistent printed output;

**Rowe Scan 850i T55 scanner:** Proficient at all aspects of using this sheetfeed scanner for high-quality output;

**Computer maintenance:** Proficient at most software installations and updates, diagnosing and correcting many minor computer problems, and installing hardware such as hard drives, disk drives, sound and video cards, and RAM modules.