

MINUTES OF THE HOUSE AGRICULTURE AND NATURAL RESOURCES COMMITTEE

The meeting was called to order by Chairman Larry Powell at 3:30 p.m. on February 25, 2009, in Room 783 of the Docking State Office Building.

All members were present except:
Rocky Fund - excused

Committee staff present:
Mike Corrigan, Office of the Revisor of Statutes
Corey Carnahan, Kansas Legislative Research Department
Raney Gilliland, Kansas Legislative Research Department
Pat Matzek, Committee Assistant

Conferees appearing before the Committee:
Tracy Streeter, Director, Kansas Water Office
Kenneth Nelson, Section Manager, Geographic Information System (GIS) Support, Kansas Geological Survey

Others attending:
See attached list.

Chairman Powell introduced Tracy Streeter, Director, Kansas Water Office, (Attachment 1) who, in part, presented information on the State of Kansas Geographic Information System (GIS) Initiative, stating that part of the job of the Water Office's responsibilities is also to chair the Geographic Information System Policy Board established in 1989 by Executive Order. Specific points of interest introduced by Mr. Streeter included:

- Strategic Planning Efforts - Help to connect GIS not only at the city and state level, but nationally; specifically, the United States Geological Survey, a major player in the GIS effort in Kansas.
- Elevation Data Business Plan - The most current maps available for elevation data are the United States Geologic Survey Topographic Maps which are accurate within up to 10 feet vertically, typically used for preliminary planning and are not accurate on some things; subsequently, there is a big need for improved elevation data.
- Light Imaging, Detection and Range (LIDAR) - Can be used for flood forecasting, flood plane mapping, transportation, precision agriculture, and urban planning. Other states working toward gaining this technology include North Carolina and Iowa.

Kenneth Nelson, Section Manager, GIS Support, Kansas Geological Survey, spoke on other points of interest in the presentation:

- Height Modernization - The primary goal is to increase the vertical accuracy of elevation measurements, while also densifying high accuracy horizontal positions to provide an improved foundation for positioning and mapping applications.
- Kansas Road Centerline Database - The project goals are to develop a comprehensive statewide road centerline database, and develop and maintain long-term partnerships with local government to support the maintenance of the database.
- Data Access & Support Center (DASC) - Online resources for GIS data, documentation, standards, and web services. Its web site is located at <http://www.kansasgis.org>.

Questions were asked and comments were made.

At the conclusion of the presentation, Chairman Powell requested Committee members to approve meeting minutes dated 2-09, 2-10, 2-11, 2-12, 2-16 and 2-17. Representative Svaty made a motion to adopt the meeting minutes. Representative Hayzlett seconded the motion. On majority vote of the Committee, the motion was carried.

The next meeting is scheduled for February 26, 2009.

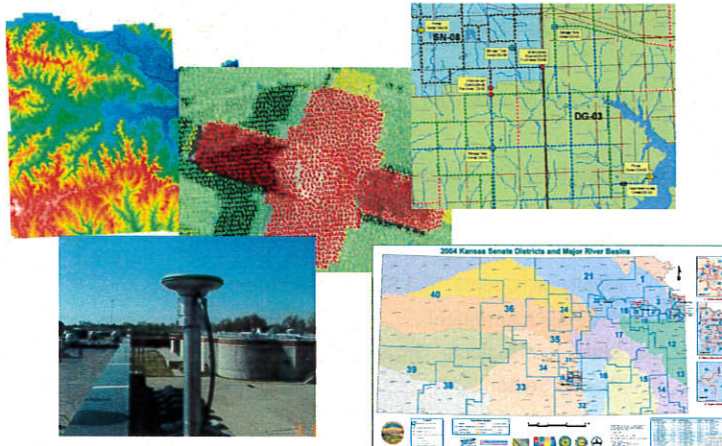
The meeting was adjourned at 4:12 p.m.

AG. & NATURAL RESOURCES COMMITTEE GUEST LIST

DATE: 2-25-09

NAME	REPRESENTING
JJ Jones	Commeree
Tracy Streets	KWO
Ken Nelson	KS. Geological Survey

STATE OF KANSAS GIS INITIATIVE



KANSAS GIS POLICY BOARD

- Established in 1989 by Governor Hayden
- Executive Order – Objectives:
 1. Coordinate the implementation and use of GIS technology by participating agencies.
 2. Provide an opportunity for prompt access to GIS technology by all participating agencies and other potential users.
 3. Promote compatibility and standards for geographic information.
 4. Promote sharing of computerized, geographically referenced data.
 5. Reduce the costs that would be involved if each agency developed its own GIS capabilities independently and networking did not take place.
 6. Enhance the information analysis and decision making process of participating agencies through the use of GIS technology.
- The Executive Order has been reestablished by each administration since Governor Hayden.

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

GIS POLICY BOARD ACTIVITIES

- GIS Initiative Strategic Planning
- Guidelines, Standards, and Policy Development
- Coordinate GIS Database Development
- Multi-Participant Coordination:
 - Municipal, County, and State Government
 - Federal Government
 - State and Regional Organizations
 - Private Sector

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

GIS POLICY BOARD MEMBERSHIP – JANUARY 2009

Tracy Streeter, Board Chairman
Director, Kansas Water Office

Denise Moore, Board Vice Chairperson
Executive Branch CITO

Joseph W. Arri,
Area Manager-OSP Planning, AT & T

Walt Aucott, District Chief
United States Geological Survey
Water Resources Division

Dr. Eric Bernard, Professor
Kansas State University

Major Gen Tod Bunting, Adjutant General
Kansas Adjutant General's Dept

Linda Buttron, County Clerk
Jefferson County

Constantine Cotsoradis, Asst Secretary
Kansas Department of Agriculture

Peter Davis, GIS Supervisor
Property Valuation Division
Kansas Department of Revenue

Greg Foley, Executive Director
State Conservation Commission

Kathleen Gosa, IT Director
Department of Education

Bill Harrison, Director
Kansas Geological Survey

Donald Heiman, Legislative Branch CITO
c/o Legislative Administrative Services

Jeff Lewis, Chief Information Officer
Kansas Department of Human Services

Brian Logan, Cartography/GIS Manager
Kansas Department of Transportation

Dr. Edward Martinko, Director
University of Kansas
Kansas Biological Survey

Gary Middleton, Director
Kansas Emergency Management Assoc.

John W. Mitchell, Director
Environment Division, KDHE

Gregg Noland, Senior Manager
Westar Energy, Inc.

Kelly O'Brien, CITO
Judicial Branch

Wayne Page
Kansas Corporation Commission

Murray L. Rhodes, Owner
Rhodes Surveyors, PA

John Rogers, GIS Manager
Sedgwick County

Travis Rome
United States Department of Agriculture
Natural Resources Conservation Service

Mark Runge
Emporia State University

Dr. Tom Schafer, Assistant Professor
Fort Hays State University

Keith Sexson, Assistant Secretary
Kansas Department of Wildlife & Parks

Kyle Tjelmeland, GIS Manager
City of Topeka

Matthew Veatch, State Archivist
Kansas State Historical Society

Robert Waller, Chief Administrator
Kansas Emergency Medical Services

Bettejane M. Wooding, Cartographer
Barton County Appraiser's Office

STAFFING:

Ivan L. Weichert, State GIS Director
Kansas Information Technology Office

Ken Nelson, Manager
Kansas Data Access and Support Center
Kansas Geological Survey
University of Kansas

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

STRATEGIC PLANNING EFFORTS:

Followed the NSGIC strategic planning process and templates – modified as necessary to meet our needs

One Strategic Plan, potentially many Business Plans

Strategic Plan:

What and Why

Vision & Goals

The "big picture" and overall context

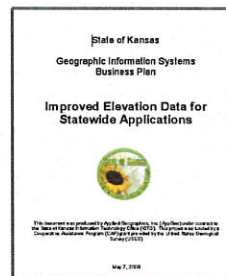
Business Plan:

How, When, and How Much

Aimed at those that approve and fund

Details of initiative(s) emerge

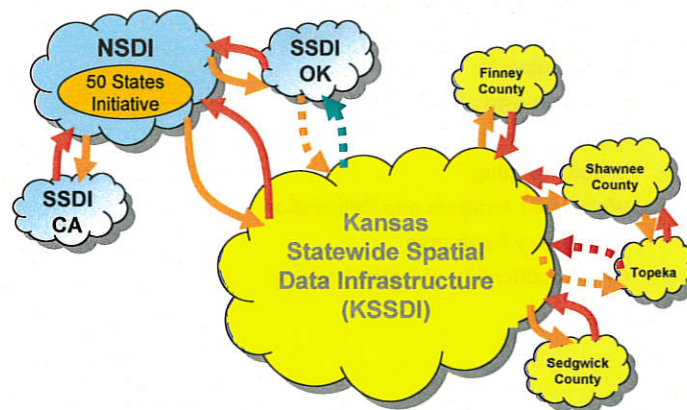
Presented as a business case



.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

STRATEGIC PLAN – VISION STATEMENT

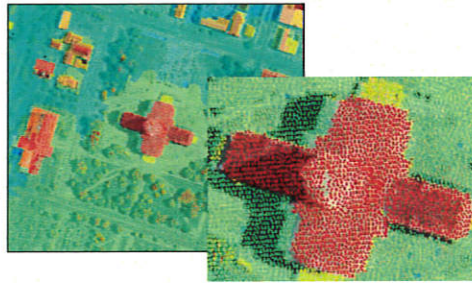
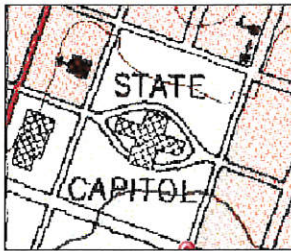
The Kansas Geographic Information System **Partnership** initiative will be a **collaborative effort** among the **statewide geospatial community** that delivers robust, map-based, **geospatial information and services** to support policy and decision making at **all levels of government**, to provide access to **public information** and to **enhance** the safety, economy, environment and **quality of life** in Kansas.



.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

ELEVATION DATA BUSINESS PLAN

- **Programmatic Goal for Business Plan:** Develop improved statewide elevation data that supports high resolution contours and detailed topographic mapping necessary for a multitude of critical applications and risk determination.
- There is a big need for improved elevation data. The "best available" state and/or national data is mediocre and does not support many important applications.
- The existing statewide elevation data is mostly derived from 20 year old USGS Topographic Maps with a 10-foot contours.



.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

APPLICATIONS & BENEFITS OF IMPROVED ELEVATION DATA

- **Flood Prediction and Mitigation**
 - Floodplain delineation
 - Flood prone properties
 - Risk determination & insurance assessment
 - Flood flow characterization (i.e., direction, velocity, depth)
 - Flood preparedness
 - Evacuation planning
 - Reverse E-911: proactive notification
- **Transportation**
- **Precision Agriculture and Soil Mapping**
- **Habitat Characterization**
- **Urban Planning**
- **Watershed Analysis and Delineation**
- **Emergency Response**
- **Orthorectification of Aerial Imagery**

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

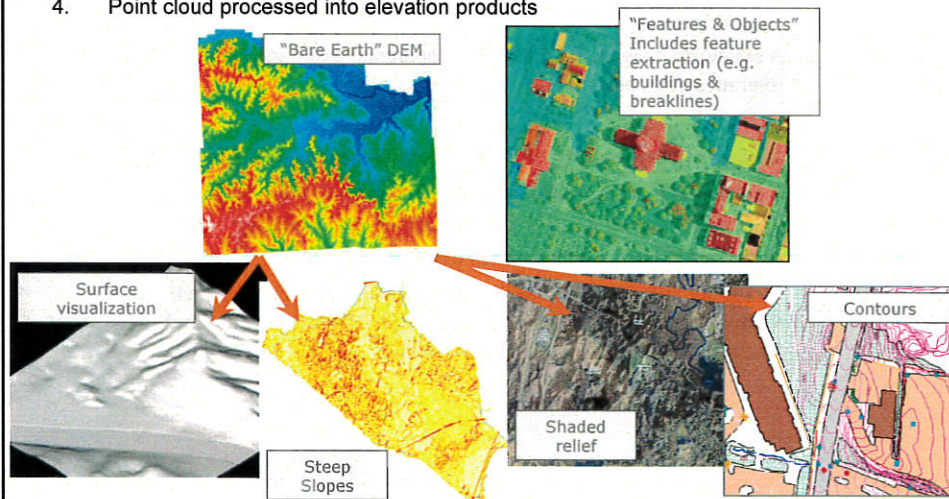
REPRESENTATIVE STATE LIDAR PROJECTS

- **North Carolina:** ~48,000 sq. miles
 - Need driven by hurricane planning
 - Received FEMA Cooperative Technical Partner's Program funding
 - Divided state into three segments
 - State and local governments have benefited
- **Iowa:** ~53,000 sq. miles
 - Funding from DOT, DNR and NRCS
 - Project planning identified potential cost savings:
 - DNR: \$390k/year from avoided planning level survey
 - DOT: \$10M+/year from cut-and-fill, preliminary planning, road grading, line-of-site
 - NRCS: \$3-5M/year from Water Quality Best Management Practices (BMPs)
 - Divided state into three segments
- **Kansas:** ~82,000 sq. miles

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

LIDAR PROJECT PROCESS & PRODUCTS

1. Aerial overflight
2. Laser scans earth and records returns
3. Raw returns are processed into a "point cloud"
4. Point cloud processed into elevation products



.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

HEIGHT MODERNIZATION

- Height Modernization (HM) is the establishment of accurate, reliable heights using GPS technology in conjunction with traditional leveling, gravity, and modern remote sensing.
- Continuously Operating Reference Stations (CORS) - A nationwide network providing GPS data for a variety of post-processing uses.



.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

HEIGHT MODERNIZATION

- **Outcomes:**
 - A denser, more accurate, 3-D (latitude, longitude, and height) geodetic control network
 - A statewide network of continuously operating and transmitting GPS reference stations
- **NOAA Grant Program to help states implement HM programs:**
 - Announced in June, 2008 – search Grants.gov (CFDA 11.400)
 - Funding limits \$100K - \$1.2 Million (\$400-\$500K average)
 - Multi-year funding available – 1-5 years
 - States currently receiving HM funding include: Alabama, Arizona, California, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Texas, Washington, Wisconsin

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

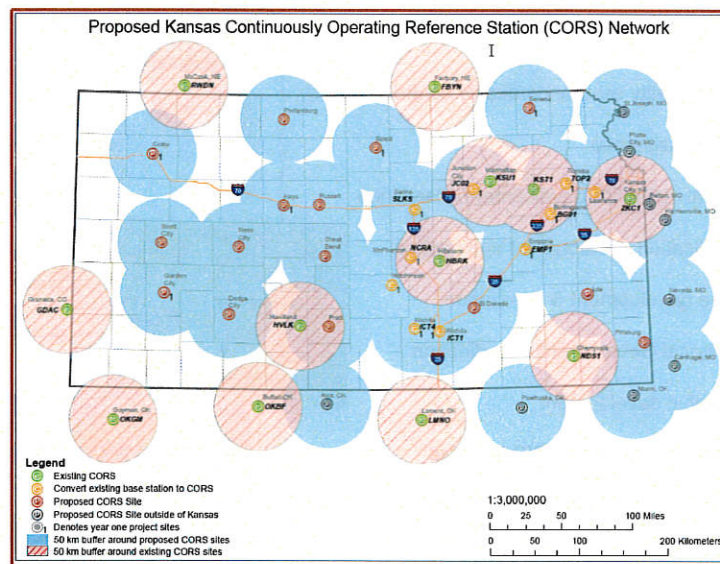
HEIGHT MODERNIZATION BENEFITS

Primary project goal - "The development of the CORS network in Kansas will significantly increase the vertical accuracy of elevation measurements, while also densifying high accuracy horizontal positions to provide an improved foundation for positioning and mapping applications."

- Lower the costs of surveying, mapping, and aerial photography throughout the state
- Improved elevation for:
 - Floodplain mapping & mapping high water marks
 - Subsidence monitoring
 - Precision agriculture
 - Transportation planning, construction, and maintenance
 - Reservoir and well monitoring
- Arizona sites these cost savings:
 - Over \$1 million annual savings on aerial mapping project contracts by local, regional and state governments
 - Over \$600,000 annual savings on planning and construction costs to Phoenix District of the Arizona DOT
 - Over \$4 million annual savings to Arizona citizens for reduced surveying costs

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

HEIGHT MODERNIZATION



.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

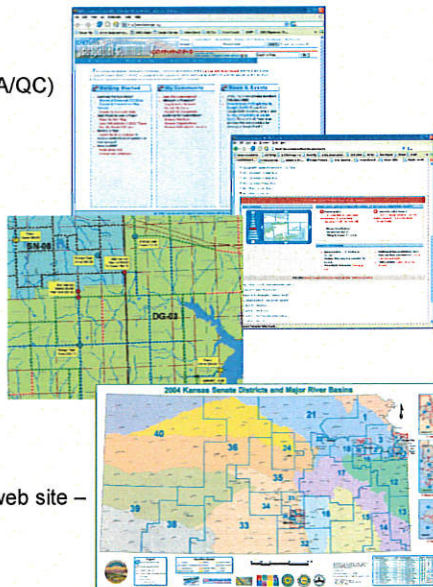
DATA ACCESS & SUPPORT CENTER (DASC)

- Established by the GIS Policy Board in 1991
- Central repository of GIS databases of statewide/regional importance
- Designated as an National Spatial Data Infrastructure (NSDI) clearinghouse node in 1997
- Located at the Kansas Geological Survey at the University of Kansas
- Web site – <http://www.kansasgis.org>

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

DASC SERVICES

- Database archival and distribution
- Database quality assurance/quality control (QA/QC)
- Technical assistance
- Geospatial metadata development assistance
- Web application development and hosting
- Database development & integration
- State & Local Government Coordination
- Cartographic development
- Promotion of the Kansas GIS Initiative
- Development and maintenance of the DASC web site – www.kansasgis.org



.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

KANSAS GEODATABASE CATALOG

Administrative/Political Boundaries – county boundaries, incorporate areas, agency district boundaries, Public Land Survey System (PLSS)...

Applications – desktop and web-based applications...

Elevation – Digital Elevation Models (DEM) and hypsography...

Environmental Resources – endangered species, riparian area inventory, designated critical habitat, stream evaluation...

Geodetic Control – GPS base station data...

Imagery/Raster – Orthorectified aerial photography (various dates and resolutions), Landsat imagery, satellite derivative products...

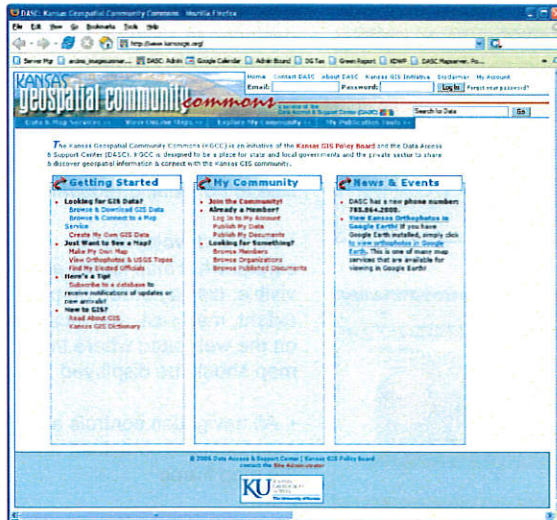
Land Surface/Geology/Soils - land cover, GAP land cover, detailed surface geology, soil surveys (SSURGO)...

Transportation – roads, highways, railroads...

Water Resources – steams, water bodies, aquifers, wetlands, rural water districts and distribution infrastructure, water well locations and water level data, watershed boundaries...

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

DASC WEB SITE – HTTP://WWW.KANSASGIS.ORG



- Online resource for GIS data, documentation, standards, and web services

- GIS Community directory provides contact information for over 900 organizations and over 2000 members

- Provides access to a variety of web-based mapping applications

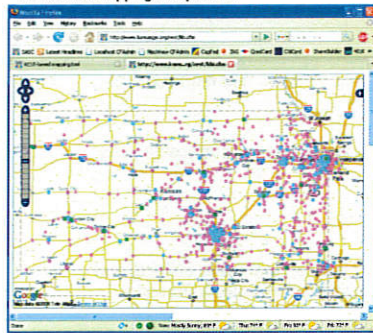
- Serves as the central hub for the Kansas GIS community

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

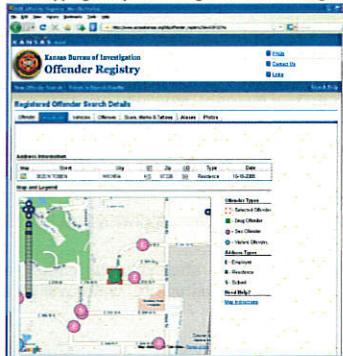
PROJECT HIGHLIGHT - KBI REGISTERED OFFENDERS v2.0 – MAPPING COMPONENT

- DASC worked in conjunction with KBI and Kansas.Gov to develop a series of web services to enable the publication of the KBI Offender Registry web site.
- DASC developed a mapping component that is delivered via a simple web service protocol.
- This type of Service Oriented Architecture (SOA) allows developers at Kansas.gov to easily integrate the interactive map into any part of the web site.
- The development of the new KBI mapping component is a prototype for future web-based mapping application development efforts.

Generic KBI Mapping Component:

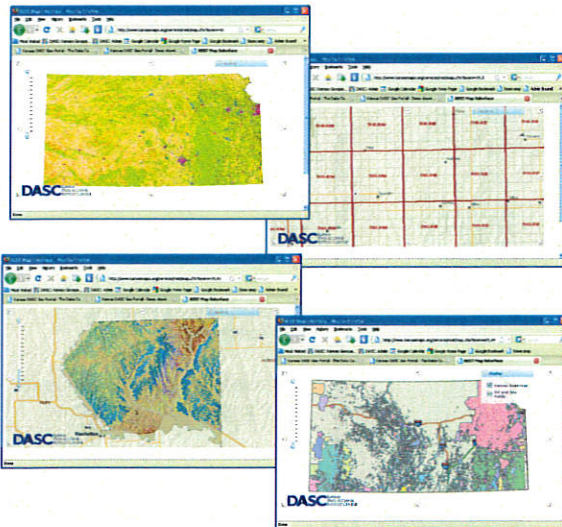


KBI Mapping Component integrated into Kansas.gov web site:



.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

PROJECT HIGHLIGHT - KANSAS MAP ENGINE (UNDER DEVELOPMENT)



- Simple Automated Programming Interface (API) designed to allow web developers to integrate interactive maps into existing web site
- Very easy to implement - little to no training required
- Allows developers to control what map layers are visible, display order, map extent, map size, and location on the web page where the map should be displayed
- All navigation controls and map tools are contained with the map frame

<http://www.<servername>.org/mapengine.cfm?layers=24,41> --> displays the base map & geology
<http://www.<servername>.org/mapengine.cfm?layers=24,41&h=800&w=600> --> displays base map & geology at 800X600 pixel size
<http://www.<servername>.org/mapengine.cfm?layers=24,41&h=800&w=600&extenttype=county&extentvalue=shawnee> --> displays base map & geology at 800X600 pixel size, and zooms to the extent of Shawnee County

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

LOCAL GOVERNMENT COLLABORATION

- DASC currently has several projects underway that are designed to develop, update, or enhance critical data layers through partnerships with state agencies, local government, and the private sector.
- DASC is serving as the area integrator to bring datasets from several organizations into seamless statewide data layers.
- Projects currently underway are:
 - Local GIS Data Backup Initiative
 - Kansas Road Centerline Database
 - Kansas Tax Units Database
 - Kansas Voting Districts Update
 - Kansas Incorporated Areas Database

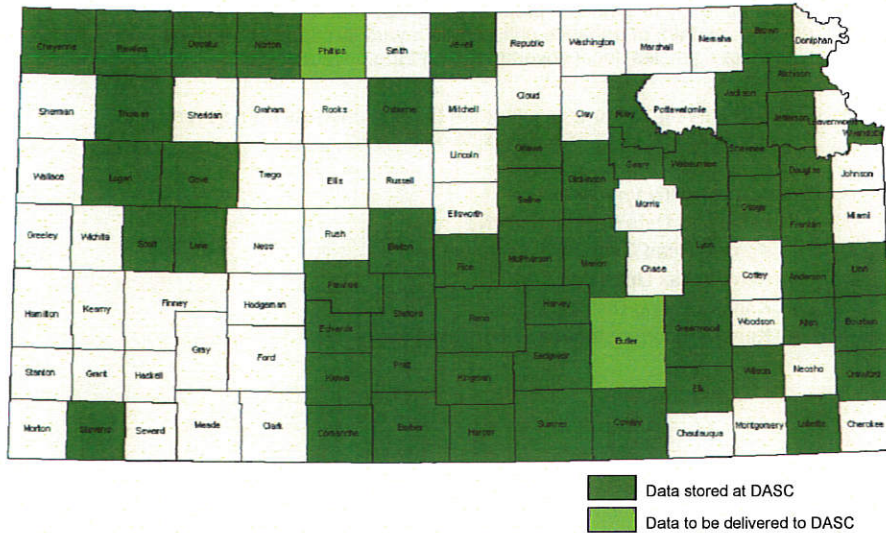
.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

LOCAL DATA BACKUP INITIATIVE

- Disasters rarely concentrated on single jurisdictions
- After a disaster, immediate access to GIS data from all affected areas critical for rescue and recovery
- DASC - State of Kansas GIS clearinghouse – has the ability to house large volumes of data for public or restricted access
- Regular synchronization with the Kansas Adjutant General's Department – saves time during an emergency
- Off-site backup for local government GIS related data and aerial imagery

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

LOCAL DATA BACKUP



.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

KANSAS ROAD CENTERLINE DATABASE

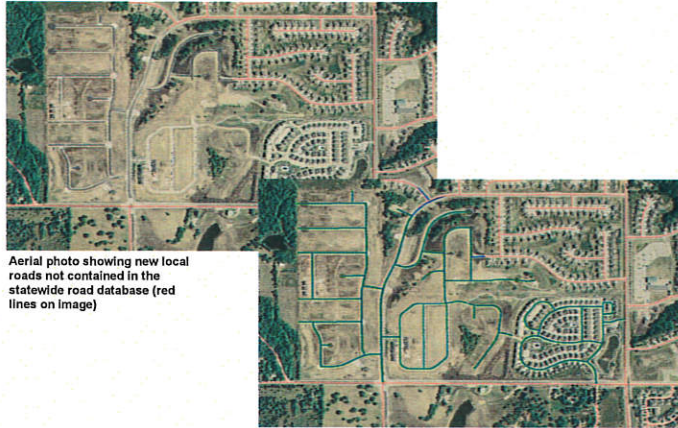
Project goals:

- Develop a comprehensive statewide road centerline database
- Incorporate local data where possible
- Develop techniques to migrate attribute data from state and local sources to the statewide network
- Develop procedures to perform regular updates
- Develop and maintain long-term partnerships with local government to support the maintenance of the database

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

KANSAS ROAD CENTERLINE DATABASE

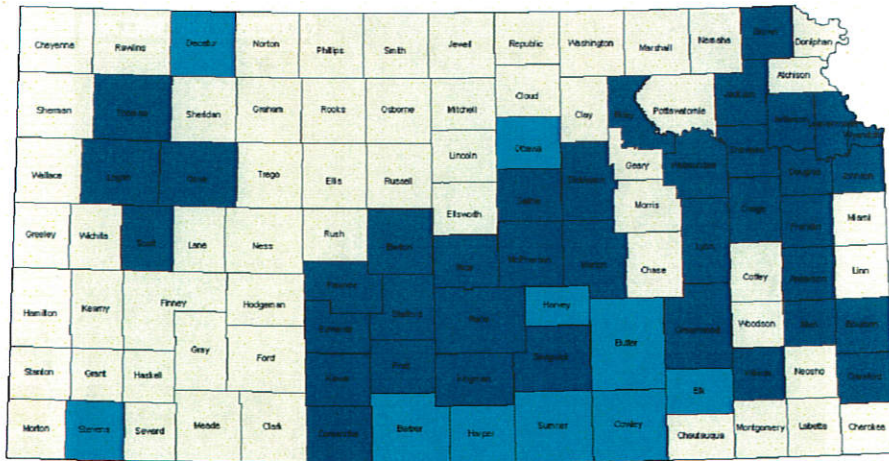
Example of area with new development in Lawrence, KS that is not included in the statewide road database



.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

KANSAS ROAD CENTERLINE DATABASE

LOCAL GOVERNMENT COLLABORATION

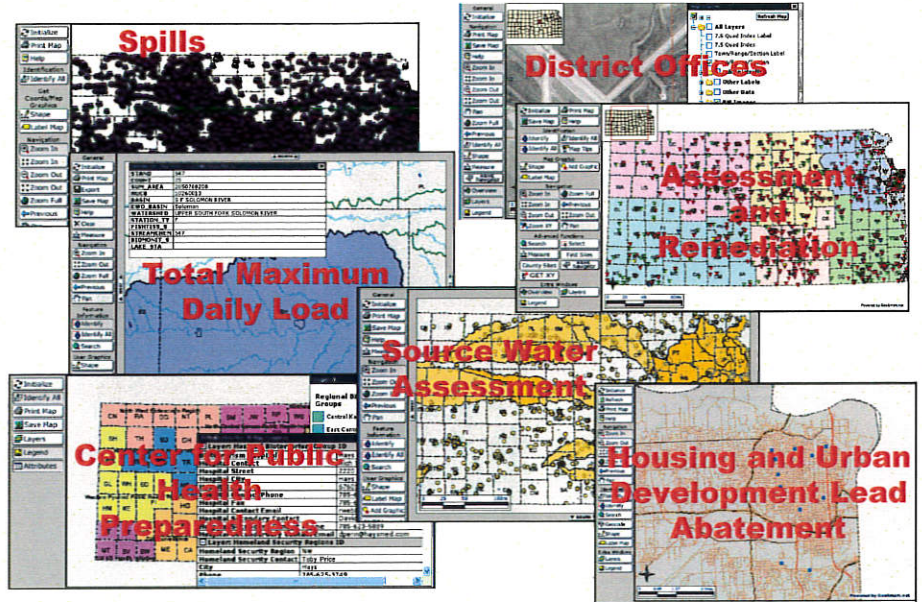


■ Data shared with DASC
■ Data to be delivered to DASC

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

KDHE WEB-BASED GIS APPLICATION EXAMPLES

FOR MORE INFORMATION CONTACT AJ THOMAS - ATHOMAS@KDHE.STATE.KS.US



.....KANSAS GIS POLICY BOARD - DATA ACCESS & SUPPORT CENTER - KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU

NORTH LAWRENCE - 2008 NAIP AERIAL IMAGE (1-M RESOLUTION)

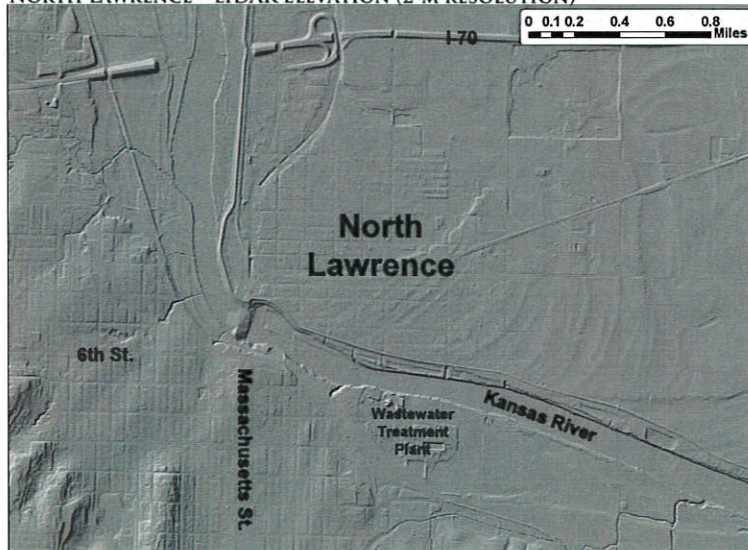


.....KANSAS GIS POLICY BOARD - DATA ACCESS & SUPPORT CENTER - KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU

NORTH LAWRENCE - LIDAR ELEVATION (2-M RESOLUTION)



.....KANSAS GIS POLICY BOARD - DATA ACCESS & SUPPORT CENTER - KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU

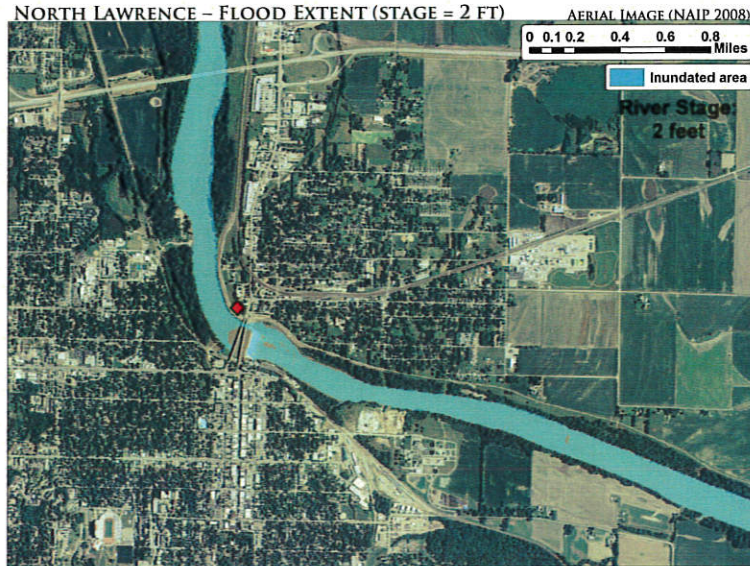
NORTH LAWRENCE - FLOOD EXTENT (STAGE = 2 FT)



.....KANSAS GIS POLICY BOARD - DATA ACCESS & SUPPORT CENTER - KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

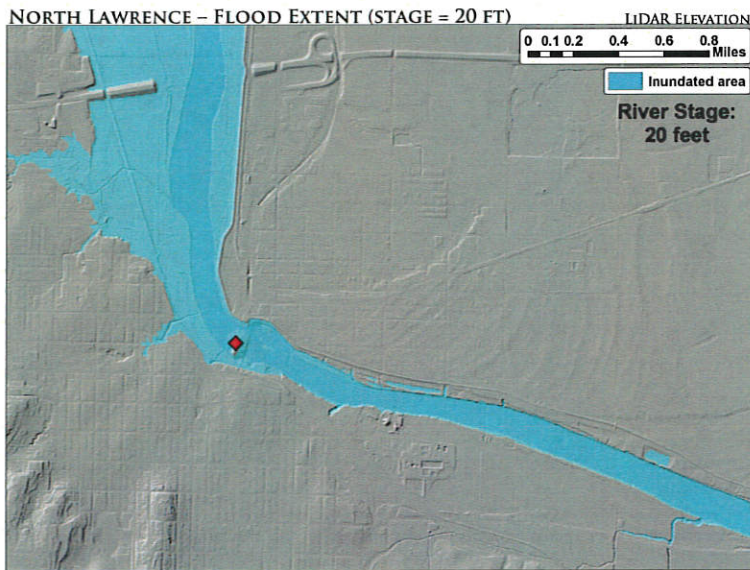
FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU



.....KANSAS GIS POLICY BOARD - DATA ACCESS & SUPPORT CENTER - KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

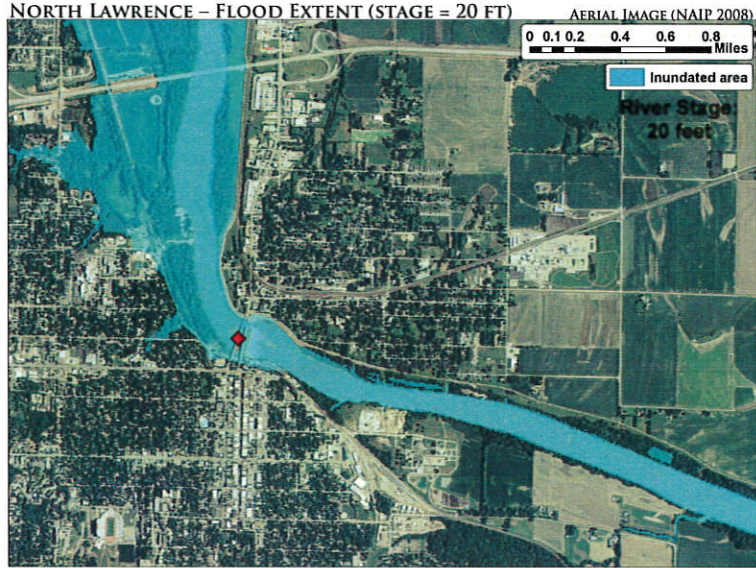
FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU



.....KANSAS GIS POLICY BOARD - DATA ACCESS & SUPPORT CENTER - KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

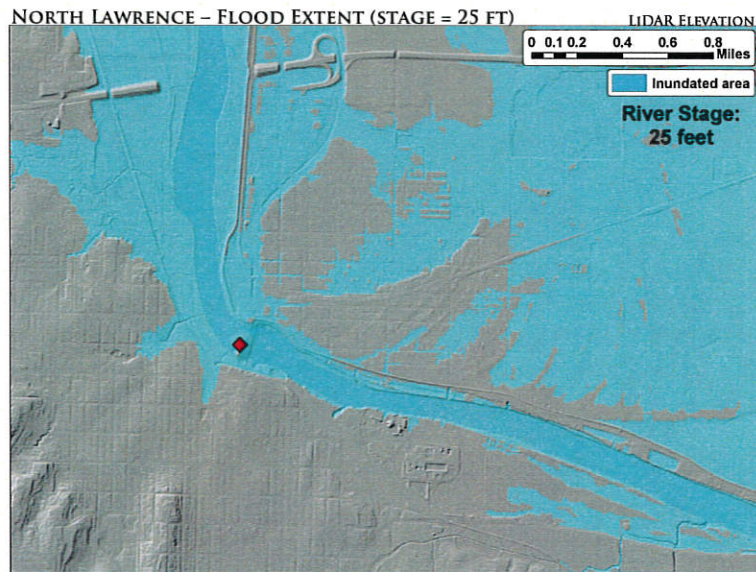
FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU



.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

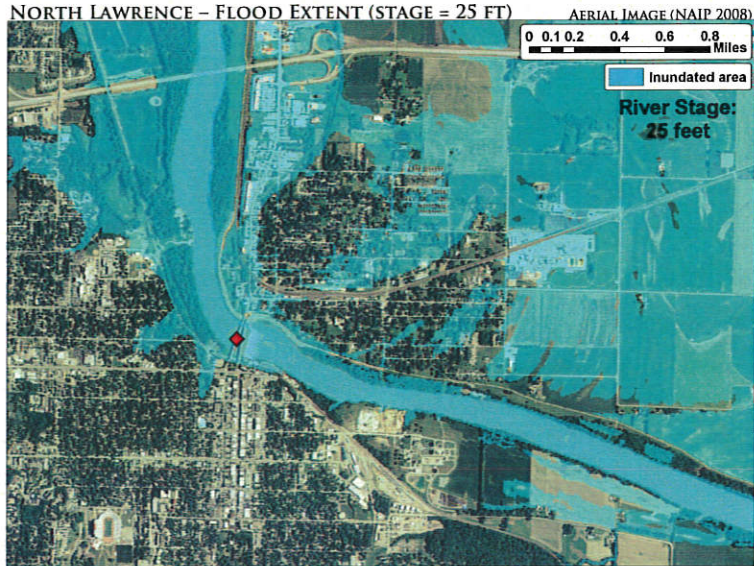
FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU



.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

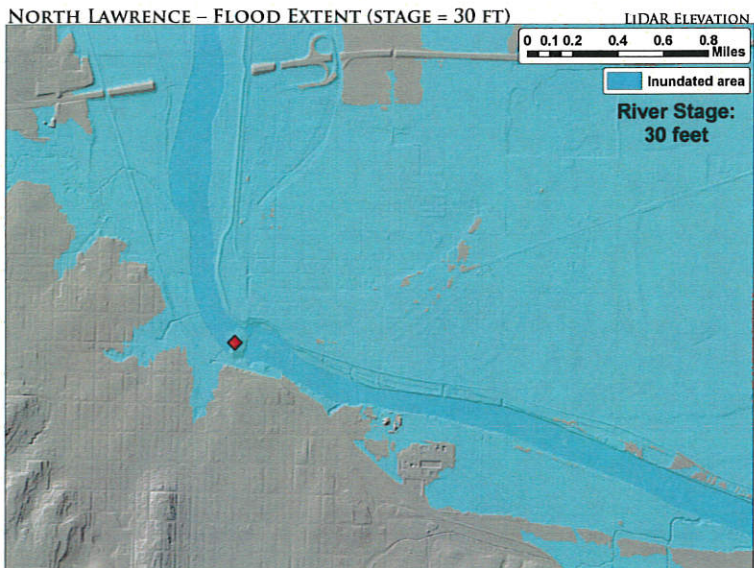
FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU



.....KANSAS GIS POLICY BOARD - DATA ACCESS & SUPPORT CENTER - KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

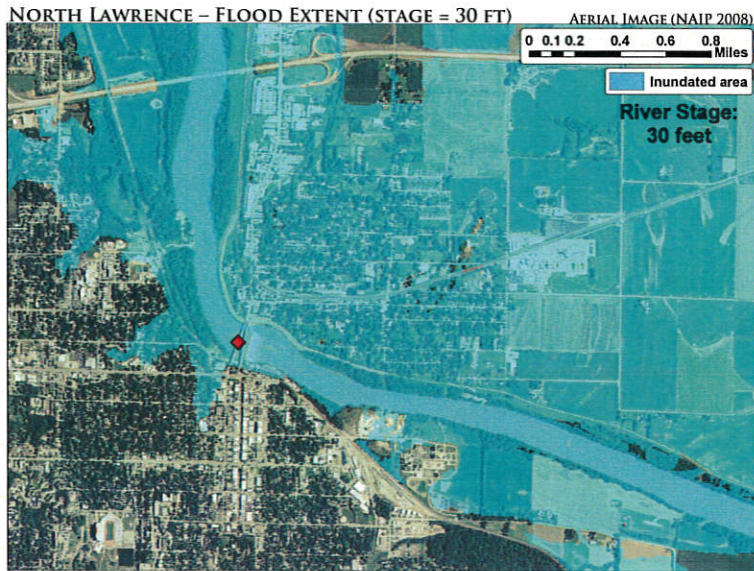
FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU



.....KANSAS GIS POLICY BOARD - DATA ACCESS & SUPPORT CENTER - KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

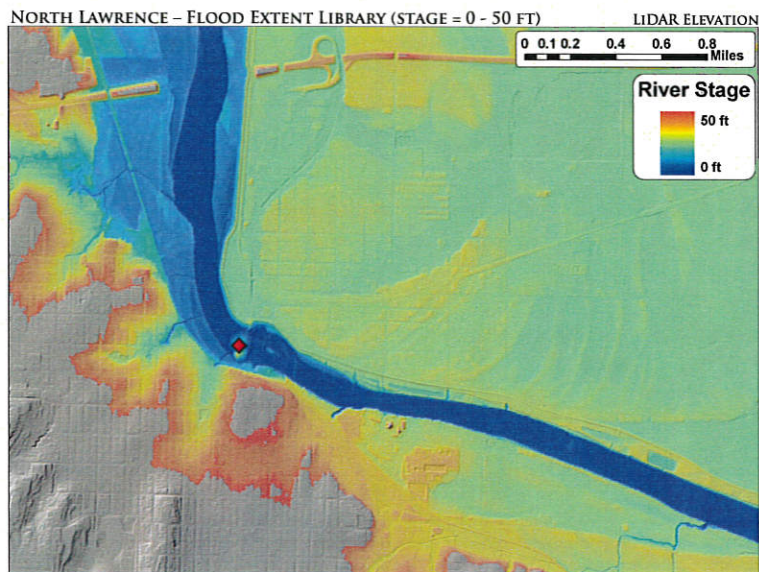
FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU



.....KANSAS GIS POLICY BOARD - DATA ACCESS & SUPPORT CENTER - KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU

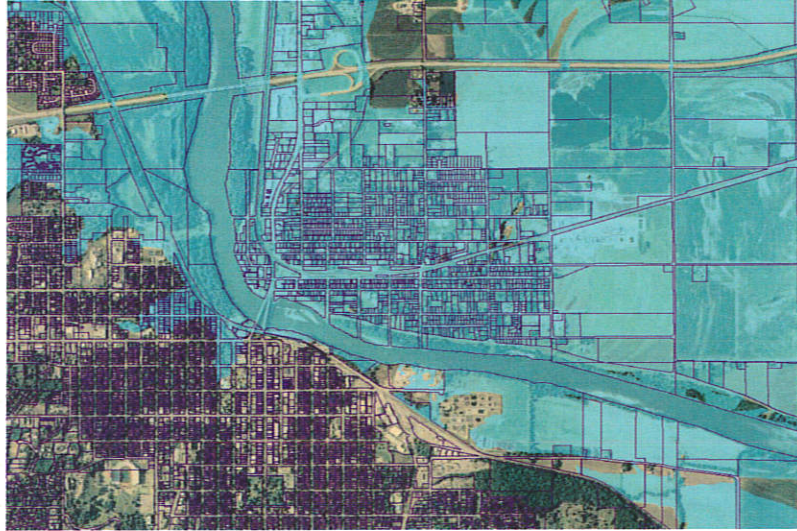


.....KANSAS GIS POLICY BOARD - DATA ACCESS & SUPPORT CENTER - KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU

NORTH LAWRENCE - FLOOD EXTENT (STAGE = 30 FT) W/PARCEL BOUNDARIES

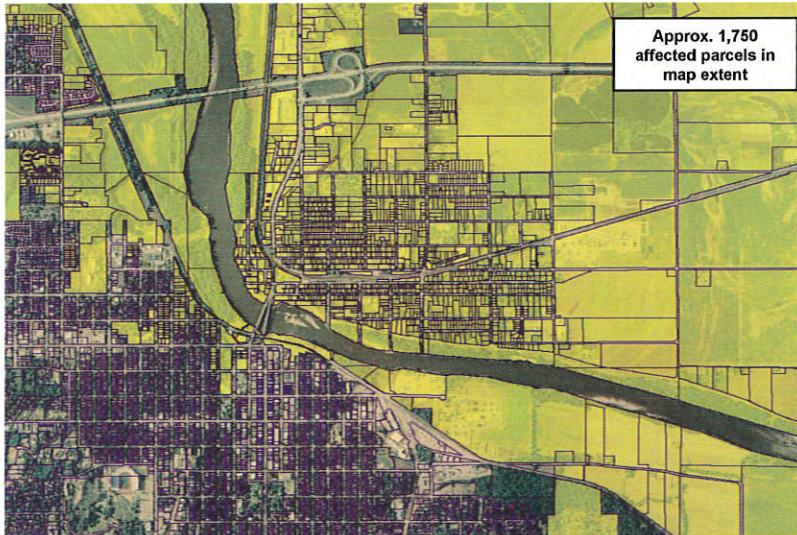


.....KANSAS GIS POLICY BOARD - DATA ACCESS & SUPPORT CENTER - KANSAS GEOLOGICAL SURVEY.....

KBS FLOOD INUNDATION MAPPING PROJECT

FOR MORE INFORMATION CONTACT JUDE KASTENS - JKASTENS@KU.EDU

NORTH LAWRENCE - FLOOD EXTENT (STAGE = 30 FT) PARCELS WITH FLOODING



.....KANSAS GIS POLICY BOARD - DATA ACCESS & SUPPORT CENTER - KANSAS GEOLOGICAL SURVEY.....

CONTACT INFORMATION

Tracy Streeter

Director
Kansas Water Office
785-296-3185
tracy.streeter@kwo.ks.gov

Ivan Weichert

GIS Director
Kansas Information Technology Office
785-296-0257
ivan.weichert@da.ks.gov

Ken Nelson

KGS GIS Coordinator/DASC Manager
Kansas Geological Survey
University of Kansas
785-864-2164
nelson@kgs.ku.edu

.....KANSAS GIS POLICY BOARD – DATA ACCESS & SUPPORT CENTER – KANSAS GEOLOGICAL SURVEY.....