

The State of Kansas  
GIS Policy Board's  
Data Access and Support Center (DASC)  
FY2017 Annual Report



Outline

Introduction 2  
Organizational Chart 2  
Funding 3  
Database Archival and Distribution 4-6  
DASC Portal 7  
Coordination & Promotion Activities 8-10  
Additional Initiatives 11-25  
Web Services 26  
Map Server Statistics 27  
Future Direction 28-29

DASC is located at

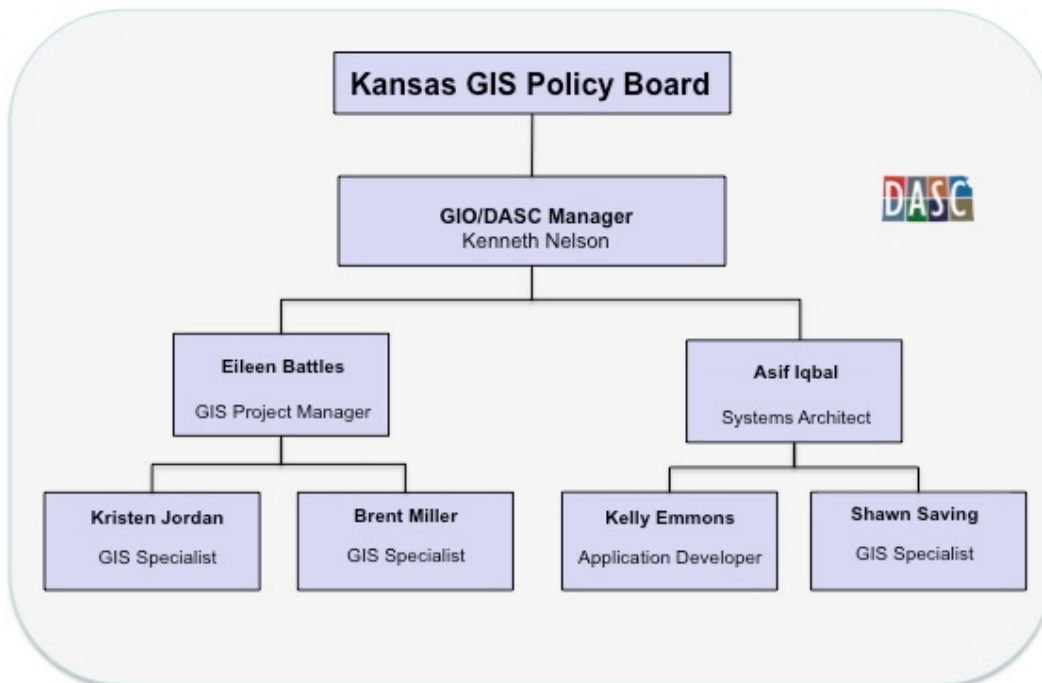
University of Kansas  
Kansas Geological Survey  
1930 Constant Avenue  
Lawrence, Kansas 66047  
Tel: 785-864-2000 Fax: 785-864-5317  
dasc@kgs.ku.edu  
www.KansasGIS.org

## INTRODUCTION

Since its inception in 1991, the Data Access & Support Center (DASC) has served as the State of Kansas Geographic Information System (GIS) data clearinghouse. Over the past 25 years, the geospatial technology industry has experienced tremendous growth and change. Once seen as a back-office technology used by a few experienced technicians, GIS is now integrated into a wide variety of applications and business processes. The availability of high-speed networks, web services, and geo-enabled mobile devices has highlighted the capability of geospatial technology and delivered it to a much wider audience.

Created as a center for the archiving and distribution of geospatial data, DASC has worked to expand its service portfolio over the years. While data archiving and distribution are still at the core of DASC's mission, DASC also provides a variety of geospatial services including web-based application development and hosting, database development and integration, state and local coordination, technical support, and local GIS data backup. These services support the Kansas GIS Initiative and complement state and local GIS activities.

Physically located at the Kansas Geological Survey, DASC serves at the pleasure of the Kansas GIS Policy Board and under the direction of the Kansas Geographic Information Officer. The following document provides a summary of DASC's services and initiatives during FY2017.



## FUNDING

DASC relies on three primary funding sources to support the variety of services it offers. These funding sources include the annual operational budget provided by the Kansas Office of Information Technology Services (OITS), in-kind support provided by the Kansas Geological Survey (KGS), and cost-recovery services. The FY2017 operational budget provided by OITS was \$210,000 and supplied salary support for the DASC staff and the Geographic Information Office (GIO) position, software maintenance fees, and travel to GIS-related events. KGS provides operational support for DASC in the form of office space, telecommunications, use of KGS vehicles, and access to computer support staff and Information Technology (IT) infrastructure.

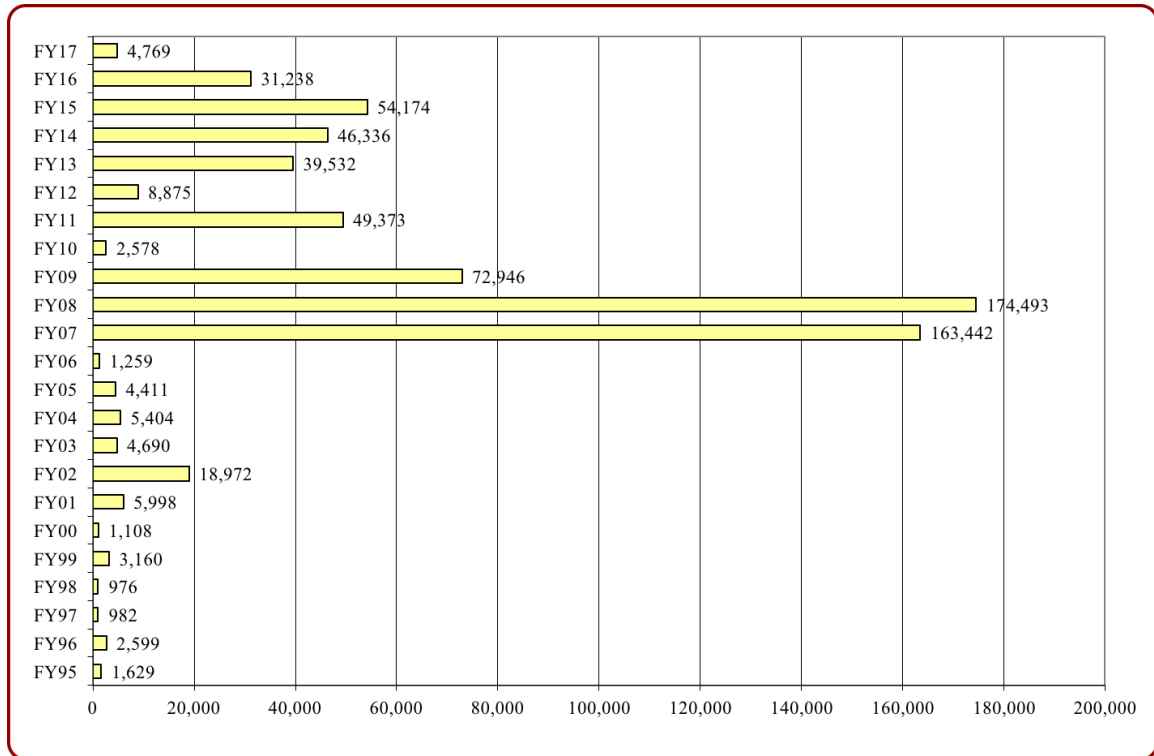
In addition to the operational funding provided by OITS and the in-kind support provided by KGS, DASC also generates revenue through cost-recovery services. The revenue generated by these services (sometimes referred to as “additional initiatives”) broadens the scope of the DASC program, enhances capability of the center, and helps cover IT-related expenses. Because these services do not follow set fiscal calendars, the most effective way to quantify the level of activity within any given state fiscal year (FY) is to calculate the total expenses for the entire DASC program, not just those funded by the annual OITS budget. The total DASC program expenses for FY2017 exceeded \$725,000.

While DASC relies on a variety of funding sources, the operational budget provided by OITS is key to the program and allows DASC to offer cost-recovery services to state agencies.

## DATABASE ARCHIVAL AND DISTRIBUTION

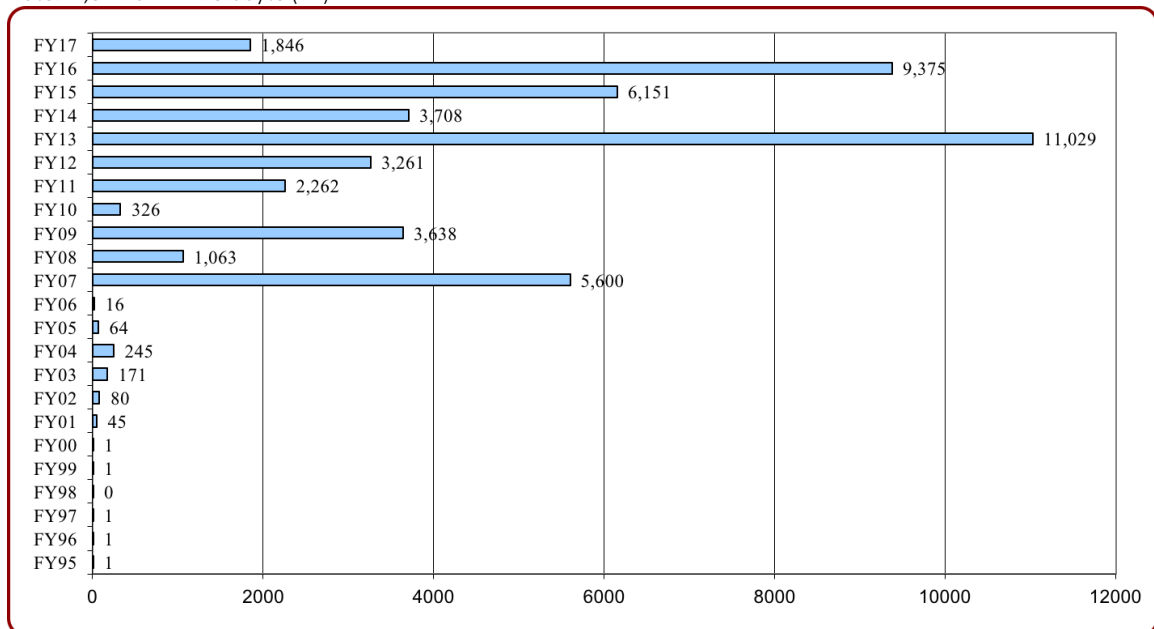
The following figures summarize database delivery, archival, and distribution activities.

Database Deliveries to DASC – Total number of files:

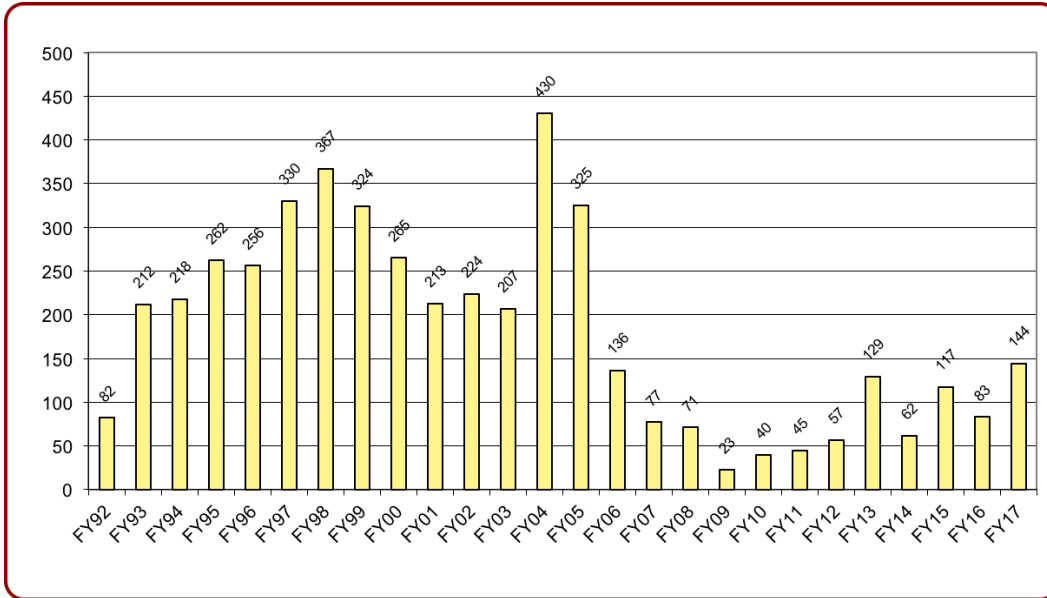


Database Deliveries to DASC – Total file size in Gigabytes (GB):

Note: 1,024 GB = 1 Terabyte (TB)

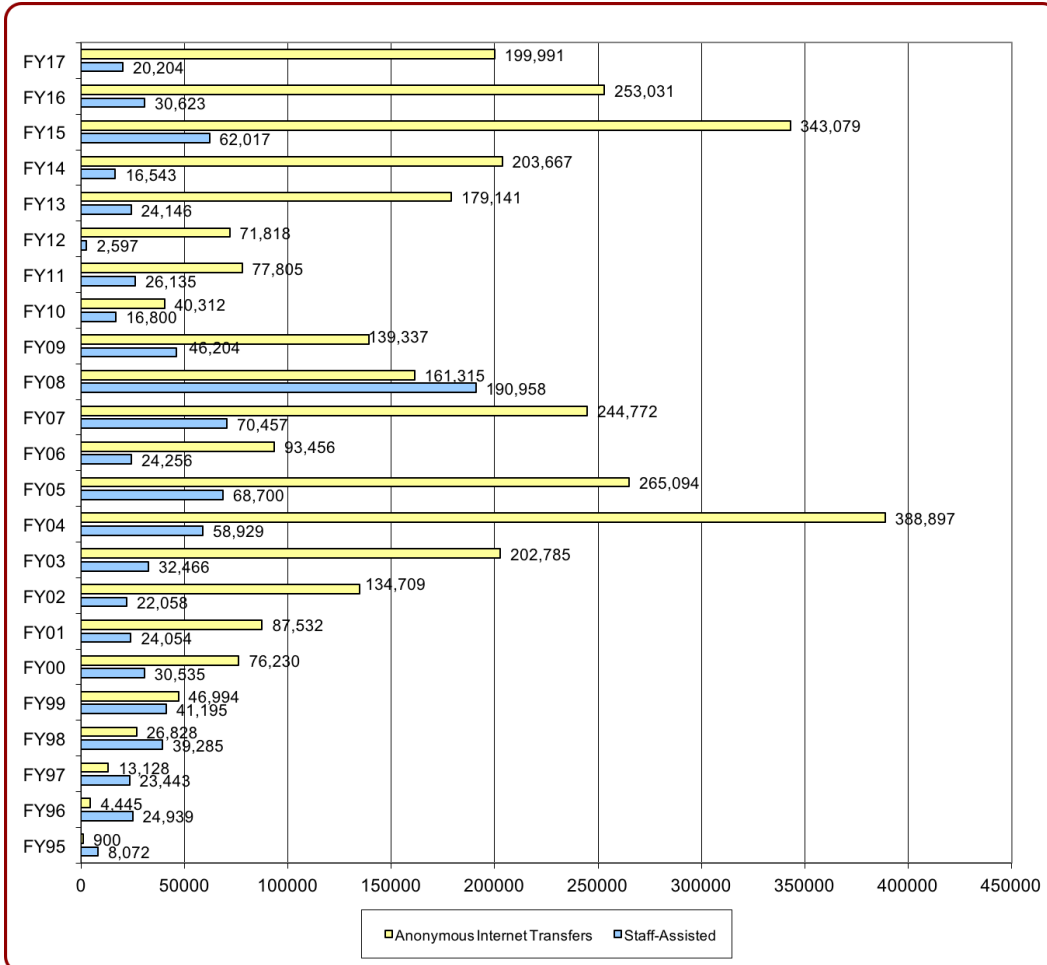


Staff Assisted Database Requests

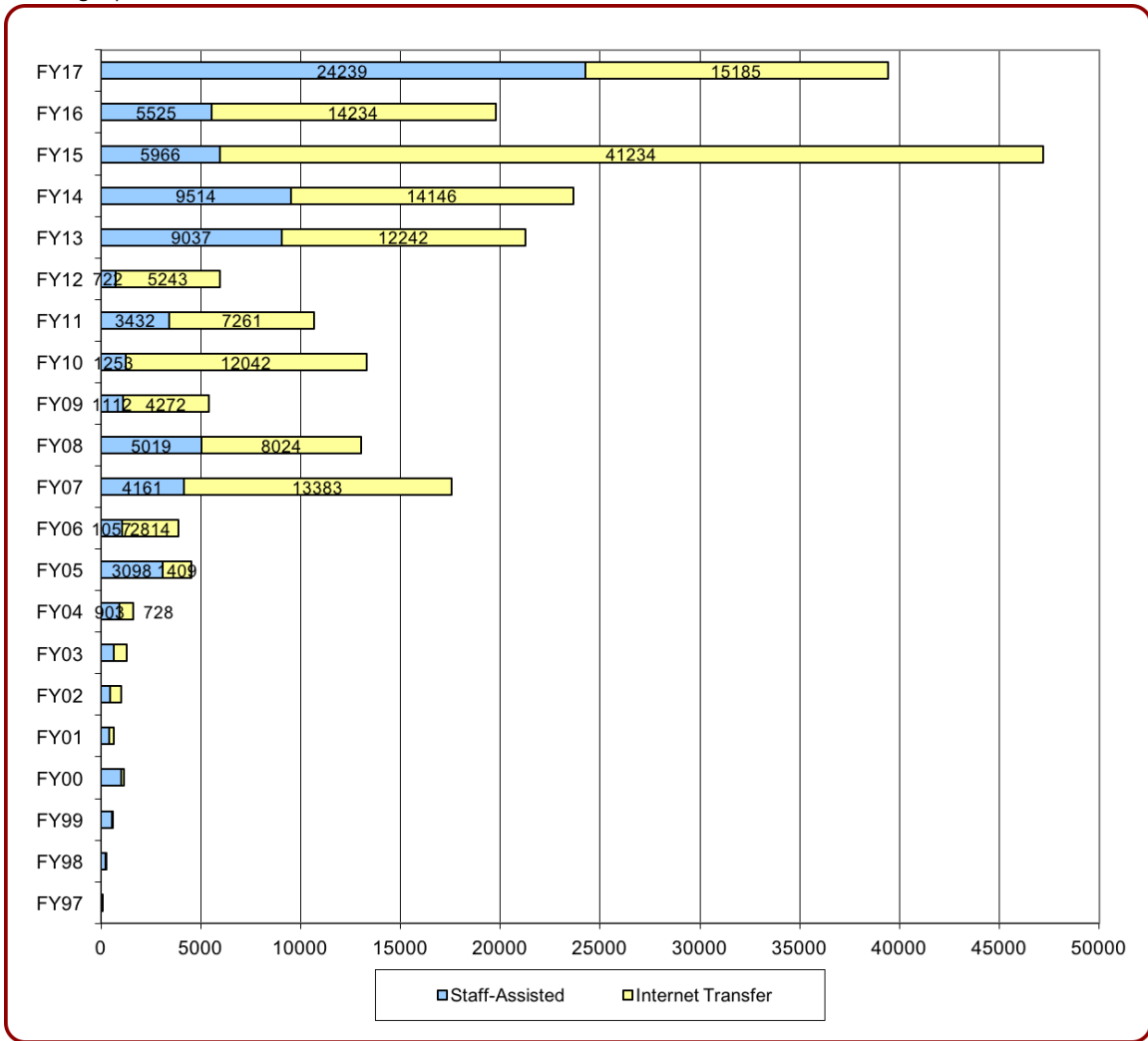


A staff-assisted request involves a customer contacting the DASC office and requesting additional file handling/processing over and above what is available free-of-charge from the DASC web site.

Total Files Distributed

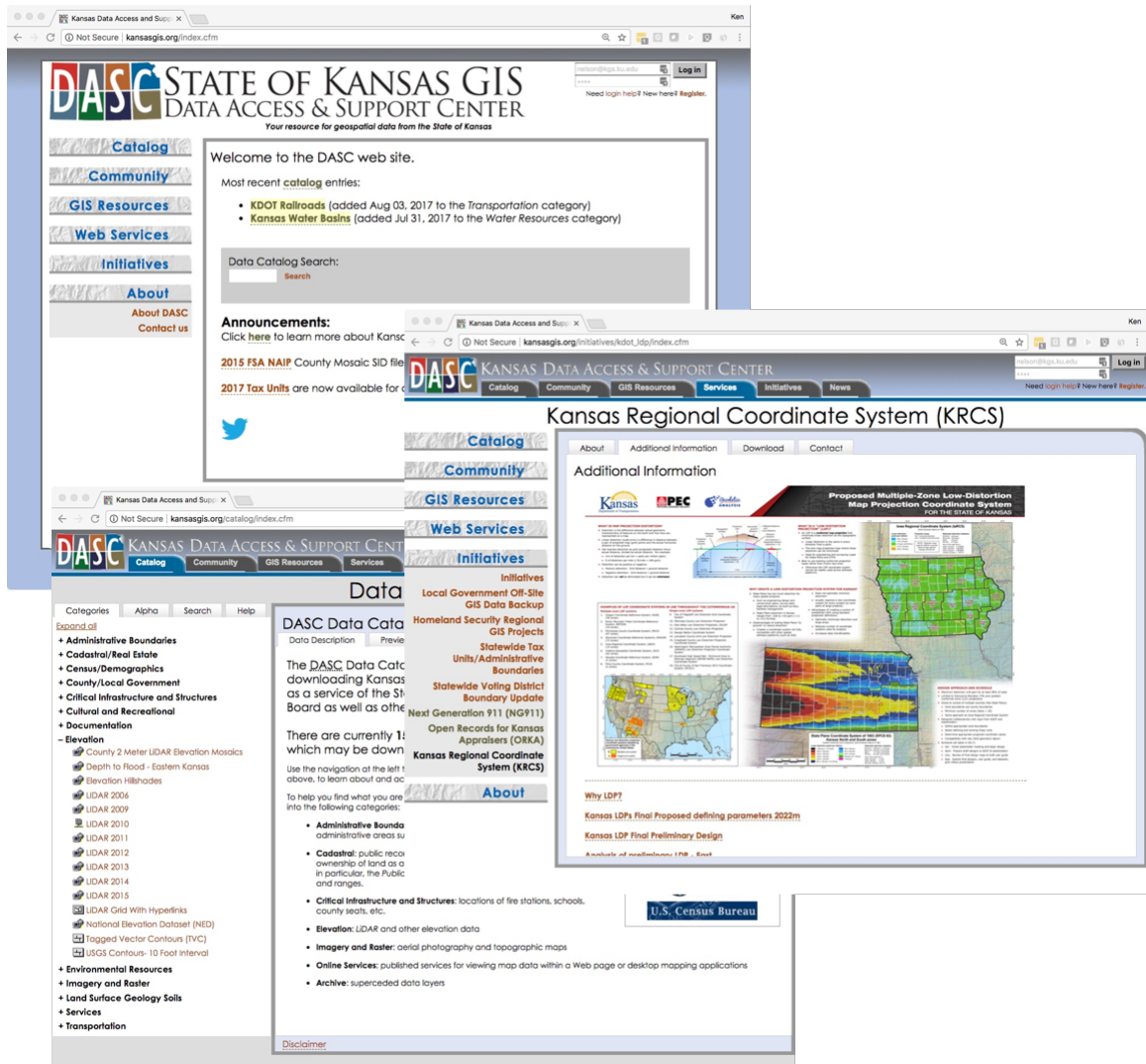


Total Gigabytes Distributed



## DASC PORTAL

The DASC Clearinghouse Portal continues to serve as the centralized place to discover and acquire geographic data, connect to map services, and learn about ongoing programs, projects, and initiatives. During FY2017, DASC continued to maintain the portal, publish GIS databases and related documents, and create and maintain “GIS Initiative” web pages.



The images above show DASC portal home page, Data Catalog, and featured section on the Kansas Regional Coordinate System

## COORDINATION & PROMOTION ACTIVITIES

In addition to the events listed below, DASC staff continued the tradition of serving on GIS-related committees throughout the year. Serving in this capacity not only provides professional development opportunities for staff members but also helps to establish and maintain relationships with the Kansas GIS community:

- Kansas Association of Mappers – 2016-2017 Past-President & website administrator
- MidAmerica GIS Consortium (MAGIC):
  - 2016-17 Steering Committee member
  - 2016 Clearinghouse Summit – Planning Committee Chair
- ArcGIS User’s Group – group coordination
- Elevation & Imagery Data Committee
- National States Geographic Information Council (NSGIC) State Representative
- Next Generation 911 (NG911)
  - Kansas 911 Council member (non-voting)
  - GIS Committee Chairperson & committee member
  - Technical Committee

Date	Event	Location
July 1, 2016	Esri Annual International User Conference	San Diego, CA
July 11, 2016	Kansas State Agencies web services coordination meeting	Topeka, KS
July 19, 2016	Kansas Esri ELA Stakeholder meeting	Topeka, KS
July 19, 2016	ArcGIS User Group Meeting	Topeka, KS
July 20, 2016	NG911 GIS Data Steward and Data Maintainer Training	Lawrence, KS
July 26, 2016	NG911 GIS Data Steward and Data Maintainer Training	Iola, KS
July 28, 2016	MAGIC Clearinghouse Summit and State GIS program updates	Conference Call
August 4, 2016	KBI project exploration discussion	Topeka, KS
August 9, 2016	KDOT Unmanned Airborne Systems	Topeka, KS
August 22-24, 2016	2016 MAGIC Clearinghouse Summit – Kansas host state	Lawrence, KS
August 25, 2016	MAGIC Clearinghouse Summit and State GIS program updates	Conference Call
August 31, 2016	DCF project consultation	Topeka, KS
September 1 & 2, 2016	NG911 Portal webinar - DDS	Webinar
September 2, 2016	MAGIC States Boundaries working group meeting	Conference Call
September 8, 2016	MAGIC States Boundaries working group – Kansas meeting with City of Lawrence and Douglas County	Lawrence, KS
September 8, 2016	MAGIC States Boundaries working group meeting	Conference Call

Date	Event	Location
September 13, 2016	KDHE project consultation meeting	Conference Call
September 15, 2016	MAGIC States Boundaries working group meeting	Conference Call
September 22, 2016	MAGIC Clearinghouse Summit and State GIS program updates	Conference Call
September 22, 2016	MAGIC States Boundaries working group meeting	Conference Call
September 26, 2016	KDHE/DCF project consultation	Topeka, KS
October 3, 2016	MAGIC States Boundaries working group – Kansas meeting with KDOT	Topeka, KS
October 5-7, 2016	Kansas Association of Mappers (KAM) Annual Conference - NG911 GIS User Group, NG911 GIS Data Maintainer Training	Manhattan, KS
October 17-19, 2016	Kansas Association of Public Communications Officers (APCO) Fall Conference – NG911 Vesta User Group, NG911 GIS Data Steward Training, NG911 Portal	Wichita, KS
October 20, 2016	MAGIC States Boundaries working group meeting	Conference Call
October 24-28, 2016	National States Geographic Information Council (NSGIC) Annual Conference	Indianapolis, IN
November 3, 2016	FCC cybersecurity workshop	Lawrence, KS
November 7, 2016	NG911 Vesta Locate template testing	Yoder, KS
November 10, 2016	ArcGIS User Group Meeting	Lawrence, KS
November 10, 2016	Traffic Record Coordinating Committee (TRCC) – Crash Mapper demonstration	Topeka, KS
November 15, 2016	MAGIC States Boundaries working group meeting	Conference Call
November 16, 2016	KU GIS Day - booth display	Lawrence, KS
November 17, 2016	Kansas Association of Counties (KAC) Annual Conference – Online Records for Kansas Appraisers presentation with KDOR/PVD	Overland Park, KS
November 16, 2016	GIS Day - booth display	Lawrence, KS
December 1, 2016	PVD demo for Geographic Regression	Topeka, KS
December 15, 2016	MAGIC Clearinghouse Summit and State GIS program updates	Conference Call
January 5, 2017	KDOT GIS project collaboration meeting	Lawrence, KS
January 24, 2017	ArcGIS User Group Meeting	Topeka, KS
January 26, 2017	Kansas/Nebraska NG911 GIS and Transportation Summit	Topeka, KS
February 17, 2017	Data archival & distribution project consultation – Haskell Indian Nations University	Lawrence, KS
February 23, 2017	NG911 GIS User Group 2017 Q1 webinar	Webinar

Date	Event	Location
February 25, 2017	MAGIC Clearinghouse Summit and State GIS program updates	Conference Call
March 14, 2017	GIS project consultation – Kansas Air Medical Transport Society	Lawrence, KS
March 21-22, 2017	NG911 Vesta Locate template testing	Yoder, KS
March 28-30, 2017	Kansas Rural Water Association Annual Conference	Wichita, KS
April 6, 2017	Natural Resources GIS meeting	Salina, KS
April 10-12, 2017	Kansas Association of Public Communications Officers (APCO) Fall Conference – NG911 Vesta User Group, NG911 GIS Data Steward Training	Overland Park, KS
April 17, 2017	Kansas Esri ELA Stakeholder meeting	Topeka, KS
April 19, 2017	ArcGIS User Group Meeting	Topeka, KS
April 17, 2017	KDOT Low Distortion Projection collaboration meeting	Topeka, KS
May 4, 2017	Data & Ethics Workshop	Prairie Band Pottawatomie Nation
May 9, 2017	NG911 GIS Data Steward and Data Maintainer Training	Wichita, KS
May 10, 2017	NG911 ESInet workshop	Topeka, KS
May 17, 2017	Data archival & distribution project consultation – Haskell Indian Nations University	Lawrence, KS
May 18, 2017	NG911 GIS User Group 2017 Q2 webinar	Webinar
May 22-23, 2017	Esri ArcPro training	Topeka, KS
May 25, 2017	MAGIC Clearinghouse Summit and State GIS program updates	Conference Call
June 4-7, 2017	National Emergency Number Association (NENA) Annual Conference	San Antonio, TX
June 13, 2017	Kansas Department of Agriculture – Kansas Base Flood Elevation Portal demo	Topeka, KS
June 13, 2017	Kansas Department of Water – Kansas Water Office Public Water Supply Portal demo	Topeka, KS
June 20, 2017	NG911 GIS Data Steward and Data Maintainer Training	Garden City, KS
June 22, 2017	MAGIC Clearinghouse Summit and State GIS program updates	Conference Call
June 28, 2017	Kansas Association of Mappers (KAM) – Raster Master training class	Manhattan, KS

## Additional Initiatives

### Esri Enterprise License Agreement

In January 2011, the state of Kansas signed an Enterprise License Agreement (ELA) with Esri, a leader in the GIS software industry. This agreement allows all state agencies to acquire new software licenses at a significant discount compared to the Esri State Master Purchase Agreement (MPA). DASC facilitates the ELA by developing software quotes for state agencies, distributing software media and license files, creating and managing ArcGIS Online named user accounts, and providing technical support as requested. During FY2015, DASC worked with the Secretary of Administration (acting CIO), OITS, state GIS leaders, and Esri representatives to negotiate a new three-year ELA. The new agreement is effective February 1, 2015 – January 31, 2018. In early CY2017, DASC assembled a team of stakeholders to begin working towards the next three year ELA renewal to provide enterprise-level GIS software to Kansas state government users. DASC conducted an Esri license deployment survey, communicated directly with users regarding current and future needs, and held two stakeholder meetings to discuss current and future ELA needs, and emerging software trends. Esri representatives were invited to the second ELA and provided an overview of Esri’s technology platform and answer questions from the group.

#### Initial three-year agreement:

- ELA Year 1 – February 1, 2011 – January 31, 2012
- ELA Year 2 – February 1, 2012 – January 31, 2013
- ELA Year 3 – February 1, 2013 – January 31, 2014

#### One-year extension:

- ELA Year 4 – February 1, 2014 – January 31, 2015

#### Second three-year agreement:

- ELA Year 5 – February 1, 2015 – January 31, 2016
- ELA Year 6 – February 1, 2016 – January 31, 2017
- ELA Year 7 – February 1, 2017 – January 31, 2018

### Software provided under Kansas State Government ELA

Item	Total Qty/Seats
Desktop Software (Single Use or Concurrent Use)	
Basic (ArcView), Standard (ArcEditor), and Advanced (ArcInfo)	unlimited
Desktop Extension Software (Single Use or Concurrent Use)	
ArcGIS 3D Analyst, ArcGIS Data Reviewer, ArcGIS Geostatistical Analyst, ArcGIS Network Analyst, ArcGIS Publisher, ArcGIS Schematics, ArcGIS Spatial Analyst, and ArcGIS Workflow Manager	unlimited
Server Software (Basic/Standard/Advanced)	
ArcGIS for Server Workgroup and Enterprise	unlimited
Server Extensions	
ArcGIS 3D Analyst, ArcGIS Geostatistical Analyst, ArcGIS Image Extension, ArcGIS Network Analyst, ArcGIS Schematics, ArcGIS Spatial Analyst, ArcGIS GeoEvent, and ArcGIS Workflow Manager	unlimited
ArcGIS Engine	unlimited
ArcGIS Engine Extensions (Single Use or Concurrent Use)	
ArcGIS 3D Analyst, ArcGIS Geodatabase Update, ArcGIS Network Analyst, ArcGIS Schematics, and ArcGIS Spatial Analyst	unlimited
ArcGIS Runtime	unlimited
ArcGIS Runtime Extensions (Single Use)	
ArcGIS 3D Analyst, ArcGIS Network Analyst, and ArcGIS Spatial Analyst	unlimited

#### ELA also includes:

- ArcGIS Subscription (Level 5) – 500 named users, 62,500 credits
- Community Analyst Subscription (Level 1) – 5 named users
- Community Analyst (additional user pack) – 5 named users
- Esri Developer Network – 2 seats
- ArcGIS Data Interoperability for Desktop Extension – 2 seats

State Agencies Covered by the Esri ELA

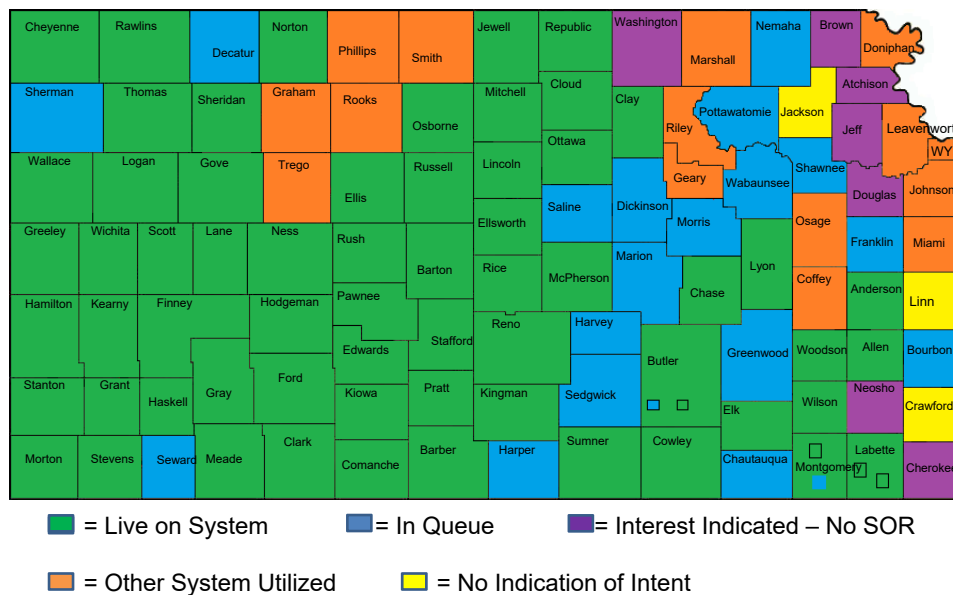
AGENCY NUMBER	AGENCY NAME
34	ADJUTANT GENERAL
39	DEPARTMENT ON AGING
46	KANSAS DEPARTMENT OF AGRICULTURE
55	ANIMAL HEALTH DEPARTMENT
58	KANSAS HUMAN RIGHTS COMMISSION
82	ATTORNEY GENERAL
83	KANSAS BUREAU OF INVESTIGATION
94	BANK COMMISSIONER
102	BEHAVIORAL SCIENCES REGULATORY BOARD
105	STATE BOARD OF HEALING ARTS
143	CORPORATION COMISSION
159	STATE DEPARTMENT OF CREDIT UNIONS
171	KANSAS HEALTH POLICY AUTHORITY
173	DEPARTMENT OF ADMINISTRATION
176	KANSAS DEVELOPMENT FINANCE AUTHORITY
178	OFFICE OF ADMINISTRATIVE HEARINGS
206	BOARD OF EMERGENCY MEDICAL SERVICES
234	FIRE MARSHAL
264	DEPARTMENT OF HEALTH AND ENVIRONMENT
276	DEPARTMENT OF TRANSPORTATION
280	KANSAS HIGHWAY PATROL
288	STATE HISTORICAL SOCIETY
296	DEPARTMENT OF LABOR
331	INSURANCE DEPARTMENT
349	JUDICIAL COUNCIL
350	JUVENILE JUSTICE AUTHORITY
359	KANSAS ARTS COMMISSION
365	KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM
371	KANSAS TECHNOLOGY ENTERPRISE CORPORATION
373	STATE FAIR BOARD

AGENCY NUMBER	AGENCY NAME
422	LEGISLATIVE ADMINISTRATIVE SERVICES
425	LEGISLATIVE RESEARCH DEPARTMENT
428	LEGISLATURE
434	STATE LIBRARY
450	KANSAS LOTTERY
482	BOARD OF NURSING
521	DEPARTMENT OF CORRECTIONS
531	BOARD OF PHARMACY
540	LEGISLATIVE DIVISION OF POST AUDIT
543	KANSAS REAL ESTATE APPRAISAL BOARD
549	REAL ESTATE COMMISSION
553	KANSAS RACING AND GAMING COMMISSION
561	BOARD OF REGENTS
562	COURT OF TAX APPEALS
565	DEPARTMENT OF REVENUE
622	SECRETARY OF STATE
625	SECURITIES COMMISSIONER OF KANSAS
626	KANSAS SENTENCING COMMISSION
629	DEPARTMENT OF SOCIAL AND REHABILITATION SERVICES
634	STATE CONSERVATION COMMISSION
652	DEPARTMENT OF EDUCATION
663	BOARD OF TECHNICAL PROFESSIONS
670	STATE TREASURER
677	JUDICIAL BRANCH
694	COMMISSION ON VETERAN'S AFFAIRS
709	KANSAS WATER OFFICE
710	KANSAS DEPARTMENT OF WILDLIFE AND PARKS
132	KANSAS 911 COORDINATING COUNCIL
	KANSAS DATA ACCESS AND SUPPORT CENTER

## Next Generation 911 (NG911)

While NG911 means different things to different people, it is first and foremost the replacement of the current analog 911 system to digital 911 communications. Major changes will be required to transition to NG911; 911 must be enhanced to support new features such as text and video. New 911 applications and Internet Protocol (IP)-enabled customer premise equipment (CPE) must be installed. NG911 will require a different means to automatically identify a caller's location and successfully route the "call" to the appropriate PSAP. NG911 will rely heavily on Geographic Information Systems (GIS) data, which must be standardized and have near real-time accuracy on a statewide basis. (Source: Next Generation 911 GIS Enhancement Project, <http://kansas911.org/DocumentCenter/View/265>)

Kansas 911 Coordinating Council – Hosted System Deployment (June 20, 2017)



To develop an accurate, statewide, standardized GIS database to support geospatial call routing and PSAP operations, the Kansas 911 Coordinating Council initiated a three-phase data enhancement project. The phases included 1) GIS Data Gap Analysis; 2) Data Remediation; and 3) Quality Assurance. Upon completion of all three phases, local jurisdictions assumed responsibility for the long-term data maintenance. By FY2017, all counties/PSAP jurisdictions across the state had completed the data enhancement process and were in compliance with the Council's data maintenance policy.

During FY2017, DASC supported many aspects of the NG911 initiative including the development and hosting of the *Kansas 911 Program Portal*, development and maintenance of the *Kansas NG911 GIS Toolbox*, PSAP map template publication, standards and policy development, and coordination and outreach activities. The following sections describe these services in greater detail.

## [NG911 Program Portal](#)

The NG911 Program Portal (*Portal*) has become a vital content management system for the NG911 program. The Portal serves as a centralized portal for all content, documents, and data related to the NG911 initiative. There were numerous enhancements to the Portal in FY2017, including the development of the GIS Data Request, GIS Training Class Tracking, PSAP Security Audit, and Travel modules, and enhancements to the GIS Data Submission, Reimbursement, Expenditure, and Change Order Request (COR) modules. The Portal also contains various administration tools that allow the 911 Council to view submission statistics and reports. Additional enhancements include advanced user and document settings, as well as an email module for communicating with the NG911 community.

### NG911 Program Portal – login page

NextGen 911 Portal x Eileen  
Secure | <https://portal.kansas911.org>  
Apps Spatial Data Store NG911 Imagery Re... NextGen 911 Portal Index of /requests BFE Portal State of Kansas GIS...

**KANSAS 911 COORDINATING COUNCIL**  
**Kansas 911 Coordinating Council Web Portal**

Home About

**NG911 Portal Login**

User Name:

Password:

Don't have a login? [Register for an account here.](#)

Forgot password? [Reset your password here.](#)

Have a question? [Contact us here.](#)

### NG911 Program Portal – GIS Data Submission Module

NextGen 911 Portal x Eileen  
Secure | [https://portal.kansas911.org/gis\\_admin.cfm](https://portal.kansas911.org/gis_admin.cfm)  
Apps Spatial Data Store NG911 Imagery Re... NextGen 911 Portal Index of /requests BFE Portal State of Kansas GIS... Historical Imagery

**KANSAS 911 COORDINATING COUNCIL**  
**Kansas 911 Coordinating Council Web Portal**

Home User Management Docs User Profile Security Audit Upload GIS Data Admin DDS Change Order  
Data Request Log out Help Manual About

View Stats Escalation Escalation History

**Filter table**

PSAP: All Changes: All Begin date:

Name: All Validated: All End date:

405 Validated, Vesta Locate, not published

Click on a row to edit

Date Uploaded	Quarter	Year	Name	PSAP	Validated	Passed
2017-01-06 14:37:04.0	1	2017	Kimberly Myers	Colby Police Department	Pass	01-06-2017
2017-01-06 14:08:49.0	1	2017	Saralyn Hayes	Leavenworth County Sheriff's Office	Pass	01-06-2017

## NG911 Toolbox

The NG911 Toolbox is a user-friendly tool to ensure that NG911 data submissions are standardized and compliant with the *Kansas NG911 GIS Data Model*. The *Toolbox* is organized into modules including Adjustment, Comparison, Conversion, Enhancement, MSAG, Data Submission, and Validation tools. During FY2017, the toolbox expanded to support program priorities, updates to the data model, and to provide additional data quality and accuracy assessment tools.

### Expanded NG911 Toolbox & sample validation results

- [-] Kansas NG911 GIS Tools.tbx
  - [-] Adjustment Tools
    - Create Geocode Exceptions
    - Fix Domain Case
    - Fix Duplicate ESB IDs
  - [-] Comparison Tools
    - Compare NG911 Data
    - Compare NG911 Geodatabases
  - [-] Conversion Tools
    - Add/Update Parcel Layer
    - Convert 1.1 to 2.0
    - GDB to Shapefiles
    - Zip NG911 Geodatabase
  - [-] Enhancement Tools
    - Add KSPID
    - Assign Unique Identifier
    - Assign Unique Identifier Road Alias Table
    - Calculate Label
    - Check Road Elevation Direction
    - Compare Road Names
    - Create Road Alias Records
    - Find Address Range Overlaps
    - Geocode Address Points
    - Split Single ESB Layer
    - US National Grid Calculator
    - Verify Road Alias
  - [-] MSAG Tools
    - Check TN List
    - Create MSAG Locator
    - Geocode Prepped TN List
    - MSAG NG911 Comparison
  - [-] Submission Tools
    - Check Data and Zip
  - [-] Validation Tools
    - 1 Check Template
    - 2 Check Address Points
    - 3 Check Roads
    - 4 Check Boundaries
    - 5 Check Additional Layers
    - 6 Optional Clear Results Table
    - 7 Optional Update Domains
    - 8 Optional Verify Topology Exceptions
    - 9 Optional Check All Required

**1 Check Template**

Completed Close

Close this dialog when completed successfully << Details

```

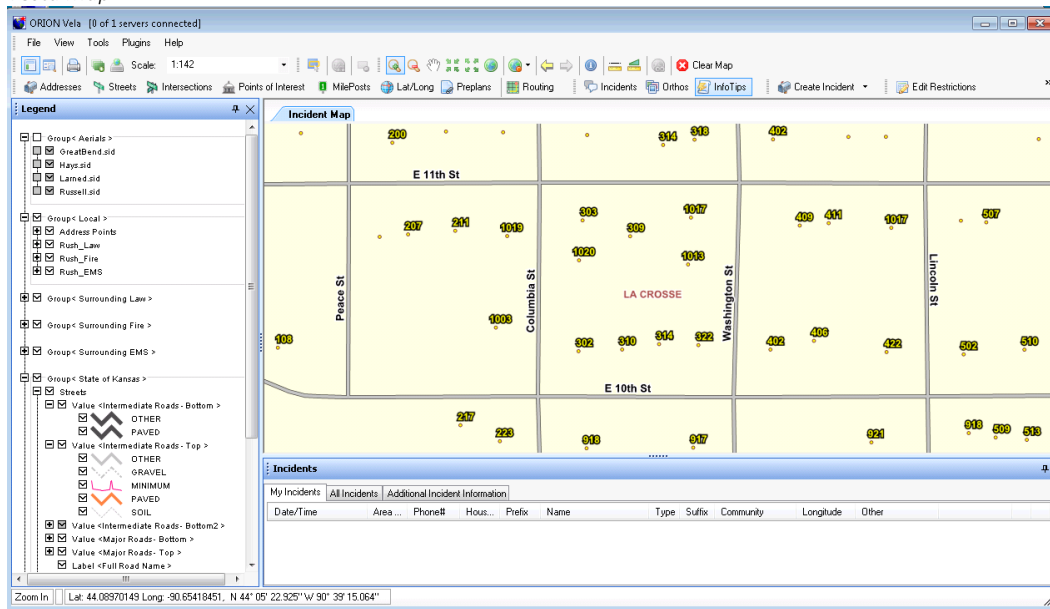
Completed check for required field
values: 0 issues found
AddressPoints: 3773 records marked for
submission
RoadCenterline: 2969 records marked for
submission
RoadAlias: 307 records marked for
submission
AuthoritativeBoundary: 1 records marked
for submission
MunicipalBoundary: 5 records marked for
submission
CountyBoundary: 1 records marked for
submission
ES2: 8 records marked for submission
E:\Kristen\Data\NG911\GDB\KSN911
_HP.gdb\HYDRANTS does not exist
E:\Kristen\Data\NG911\GDB\KSN911
_HP.gdb\GATES does not exist
ESB_EMS: 3 records marked for
submission
ESB_LAW: 4 records marked for
submission
ESB_FIRE: 4 records marked for
submission
ESB: 8 records marked for submission
Checking for invalid geometry...
E:\Kristen\Data\NG911\GDB\KSN911
_HP.gdb\HYDRANTS does not exist
E:\Kristen\Data\NG911\GDB\KSN911
_HP.gdb\GATES does not exist
Completed for invalid geometry: 0
issues found
                    
```

DESCRIPTION	LAYER	FIELD	FEATUREID *
Error: Feature not inside authoritative boundary	Hydrants		14013103744690
Error: Feature not inside authoritative boundary	Hydrants		14013103744699
Error: Feature not inside authoritative boundary	Hydrants		14013103744712
Error: Feature not inside authoritative boundary	Hydrants		14013103744756
Error: Feature not inside authoritative boundary	Hydrants		14013103744758
Error: Feature not inside authoritative boundary	Gates		140123031719
Notice: Segment's address range is from high to low instead of low to high	RoadCenterline		RLC00467
Notice: Segment's address range is from high to low instead of low to high	RoadCenterline		RLC00468
Notice: Segment's address range is from high to low instead of low to high	RoadCenterline		RLC00469
Notice: Segment's address range is from high to low instead of low to high	RoadCenterline		RLC00472

## NG911 Vesta Locate map templates

DASC creates, manages and publishes the *Vesta Locate* map templates for PSAPs on the Council's hosted call handling solution. Over 368 map templates were published during FY2017 utilizing current, accurate, locally maintained data. Similar to an ArcMap project file, *Vesta Locate* templates contain a table of contents, layer symbology, scale dependencies, label properties, and map projection information. Centralized management of map templates ensure a standardize look-and-feel and provides PSAPs access to statewide data.

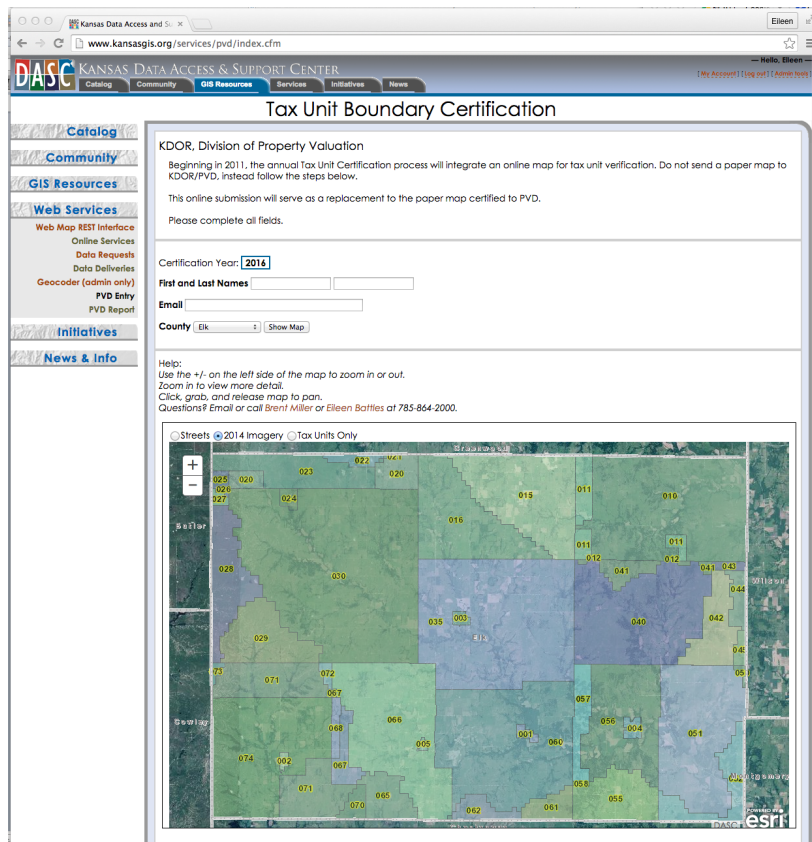
### Vesta Map



## KANSAS STATEWIDE GIS TAX UNIT BOUNDARY DATABASE

Since 2009, DASC has participated in a collaborative effort with the State of Kansas Department of Revenue/Property Valuation Division (KDOR/PVD), and county clerks to create and verify a statewide GIS tax unit boundary file. Every year, county clerks certify tax unit updates to KDOR/PVD from December 1 through November 30. As part of this process, DASC has developed a custom map viewer that allows clerks to interactively review tax unit boundaries and determine if updates are necessary. If a county has data updates, they submit revised data to DASC in a GIS format or request a large-format paper map on which they annotate boundary edits. DASC has published an annual statewide tax unit boundary file for the years 2011 – 2016 and is currently updating the 2017 version of the database.

The success of this project is largely due to the support and participation of county clerks across the state. Before the statewide GIS dataset was available, clerk's offices often had to print and ship tax unit maps to numerous utilities and private sector companies. The availability of this dataset has alleviated this need and streamlined access to current and authoritative data.

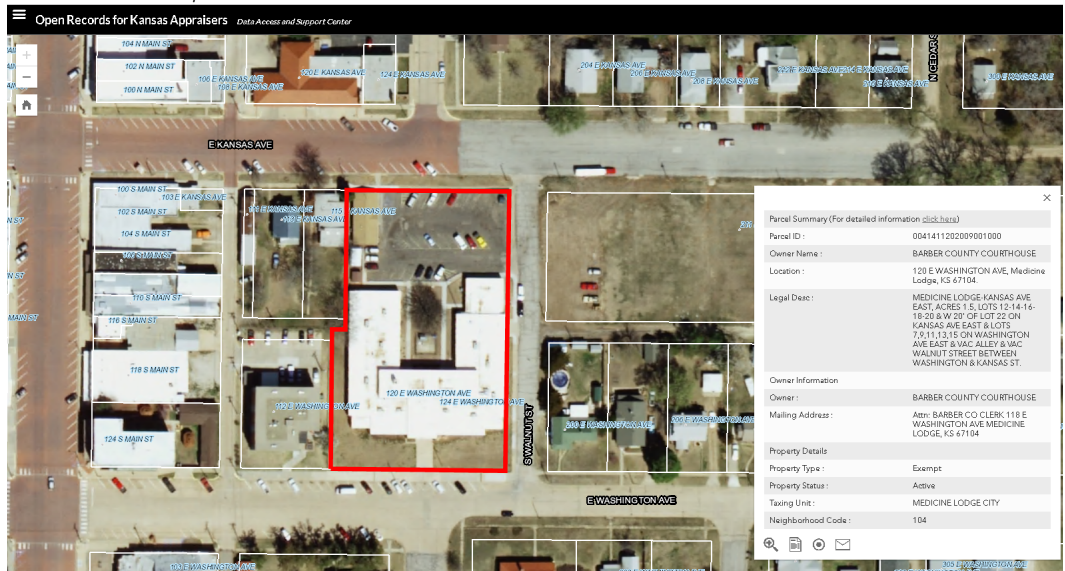


Tax Units Boundary interactive map viewer



During FY2017, DASC continued development of a new version of the ORKA application to replace the original version launched several years ago. The new application will contain both local government and statewide versions. The local government version will replace the existing county-based ORKA web sites. Counties will determine if the sites are public or password-restricted. The statewide version will provide access to statewide parcel and CAMA data and specialized tools required by state government. The statewide version will be password-protected and all users will be approved by PVD. The new versions of the application will leverage Esri's latest JavaScript web map technologies and support desktop, tablet, and mobile devices.

*ORKA v4.0 – desktop web browser*



*ORKA v4.0 – mobile browser*



## KANSAS ONLINE WATER USE REPORT

Water, like other natural resources in Kansas, is protected for the use and benefit of the citizens of this state. The Kansas Water Appropriation Act protects both the people's right to use Kansas water and the state's supplies of groundwater and surface water for the future through water rights. The law is administered by the Kansas Department of Agriculture's Division of Water Resources (DWR), which issues permits to appropriate water, regulates usage, and keeps records of all water rights in the state. A water right is a real property right under which a person may lawfully divert and use water.

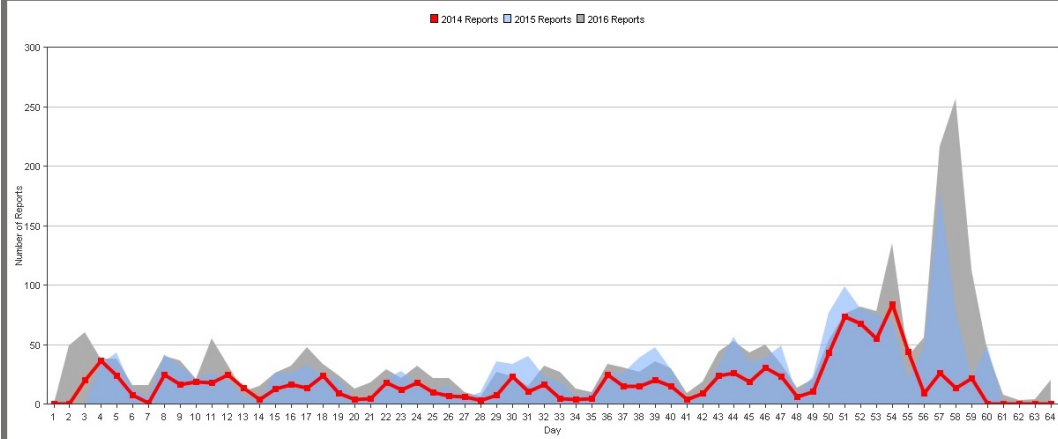
Each year approximately 14,650 water use reports are mailed to water right holders in Kansas. Due to the volume of information DWR receives, a standard, paper form is required. Compliance with the reporting requirement has drastically improved the state water use database yielding valuable information. This has resulted in Kansas having a superior water use database. However, the paper forms are very cumbersome for both DWR and water right holders, especially irrigators and public water suppliers that have many water rights.

During the spring of 2013, KGS and KDA began development of a web-based water use reporting system. The initial phase of the project established the backend application infrastructure and created the Irrigation and Municipal reporting modules. Funded by the Kansas GIS Policy Board (Kansas Water Plan fund), Phase II of the project (2014) focused on a test release of the Irrigation and Municipal modules, and the development of 10 additional modules. Phase III (2015), focused on the first public launch of the application, enhancements to existing modules, and development of the Hydraulic Dredging and Water Power modules. By Phase IV, the CY2016 reporting year, the site contained modules for all 14 beneficial uses of water. As illustrated by the images below, there's been steady growth in the adoption of the site since 2014. During the CY2017 reporting year, approximately 20% of all water use reports were filed online.

Module #	Module Name	Implementation Phase
1	Artificial Recharge	Version 2
2	Contamination remediation	Version 2
3	Dewatering	Version 2
4	Domestic	Version 2
5	Fire protection	Version 2
6	Industrial	Version 2
7	Irrigation	Version 3
8	Municipal	Version 3
9	Recreation	Version 2
10	Sediment Storage	Version 2
11	Stockwater	Version 2
12	Thermal Exchange	Version 2
13	Hydraulic Dredging	Version 1
14	Water Power	Version 1

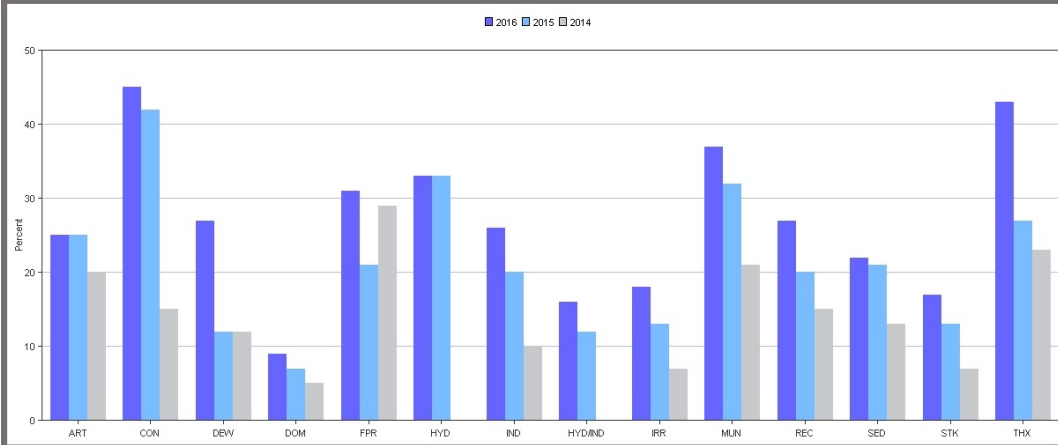
## Online Water Use Reporting 2014 - 2016

Submitted reports by day:  
(graph starts on the first Monday of January)



Year	Reports Submitted	Percent Submitted	Water Rights Submitted	Pds Submitted	Logged In Submitted	Saved Reports Submitted
2016	2,543	20.37%	7,453	10,604	90.05%	98.57%
2015	1,881	15.00%	5,635	8,141	85.19%	97.51%
2014	1,127	8.99%	3,377	4,624	74.78%	95.18%

Percent Submitted by Use:



Kansas Water Use Report Dashboard

### 2011 IRRIGATION WATER USE REPORT

This is the annual Water Use Report required to be filed for all Vested or Appropriation Rights. IMPORTANT: Kansas Law requires this completed report to be filed by March 1. Failure to do so will subject the owner to a civil fine not to exceed \$250 per file number. If any point of diversion shown below is permanently inoperable, please circle it. IF YOU DID NOT USE WATER, YOU MUST REPORT THE REASON FOR NON-USE TO HELP PROTECT YOUR WATER RIGHT. Information on each point of diversion must be completed. Please begin by reading the attached instructions and definitions.

FILE NUMBER	LEGAL DESCRIPTION OF POINT(S) OF DIVERSION		CIN	CHM	ACRES IRR.	INCLUDE MULTIPLICATION FACTOR			UN	HOURS PUMPED	PUMP RATE (GPM)	CROP CODE	TYPE OF SYSTEM	TYPE OF ENERGY	WELL DATA	
	QUALIFIERS	SEC TWP RING				BEGINNING WATER METER READING	ENDING WATER METER READING	METERED QUANTITY OF WATER							DEPTH TO WATER	DATE MEASURED
9781-00	NC SE	27-23S-13W	1	M	130	49,641,200	13,441,600	63,800,400	G			2	4	0	20-3	2-12
12868-00	1320N 3950W AKA: WELL #11	33-24S-12W	1		130	41,262,900	87,933,100	46,670,200	G			2	4	0	29-6	2-11
16623-00	3960N 1320W AKA: WELL #1	34-23S-13W	1		130	40,210,900	09,617,300	69,406,400	G			2	4	0	17-8	2-12
16953-00	1320N 3960W AKA: 5 YR ALLOCATION - WELL #2	27-23S-13W	2		90	477,889	643,361	165,472	F			2	4	0	21-9	2-12
17939-00	3880N 2610W AKA: 80" S ORIG WELL	34-24S-12W	4	C		See File	22,579 MB	1,128 FHRU		2579						
18071-00	3960N 1308W	28-28S-11W	1	M	130	62,500,300	40,629,600	78,129,300	G			2	4	0	43-1	2-12
19430-00	3940N 3960W	28-23S-14W	1	M	130	54,476,300	09,192,300	54,716,000	G			2	4	0	26-11	2-12
19431-00	3960N 1320W	28-23S-14W	2	M	130	28,170,400	19,744,200	91,573,800	G			2	4	0	29-10	2-12

CALENDAR YEAR: 11 OFFICE USE: 4394 FIELD OFFICE: 1 CO GMD: SF

11 4394 1 1 - IRR Staff SF 05 67 1028

I submit the report as the best information available. I understand that knowingly falsifying the report is a violation of state law.

SIGNATURE: DATE:

WATER RESOURCES RECEIVED

MAR 01 2012

DEPT OF AGRICULTURE

Paper Water Use Report

### Kansas Annual Water Use OnLine Reporting System

Water Use List | Print Report | View Report | Instructions | Terms and Definitions | Change Address | Log out

## Irrigation Report

Point of Diversion		Irrigation			Quantity	Well Depth (ft)	Depth Water
<b>3154-00</b> 3340'N 91D'W 9-30-33W NW SE NE C1N: 1 IRR REVERTED BACK TO ORIGINAL WELL <a href="#">Alias?</a>	<b>Was point of diversion used during the past year?</b> <input checked="" type="radio"/> Yes <input type="radio"/> No	Acres: <input type="text"/>	Energy Type: <input type="text" value="Electricity"/>	Is chemigation planned for next year? <input type="radio"/> Yes <input checked="" type="radio"/> No	Report Water Usage: <input type="text"/>	<input type="text" value="optional"/>	<input type="text" value="optional"/>

←
→

[Next](#)

Contact us: 785-564-6638 [wateruse@kda.ks.gov](mailto:wateruse@kda.ks.gov)

Irrigation Report

### Kansas Annual Water Use OnLine Reporting System

Water Use List | Print Report | View Report | Instructions | Terms and Definitions | Change Address | Log out

## Irrigation Report

Point of Diversion		Irrigation			Quantity	Well Depth (ft)	Depth Water
<b>3154-00</b> 3340'N 91D'W 9-30-33W NW SE NE C1N: 1 IRR REVERTED BACK TO ORIGINAL W <a href="#">Alias?</a>							

**If you grew crops on your land last year, check the appropriate crops:**

<input type="checkbox"/> Alfalfa	<input type="checkbox"/> Corn	<input type="checkbox"/> Sorghum (Milo)	<input type="checkbox"/> Soybeans
<input type="checkbox"/> Wheat	<input type="checkbox"/> Oats	<input type="checkbox"/> Barley	<input type="checkbox"/> Rye
<input type="checkbox"/> Dry Beans	<input type="checkbox"/> Sunflowers	<input type="checkbox"/> Athletic Field	<input type="checkbox"/> Golf Course
<input type="checkbox"/> Truck Farm	<input type="checkbox"/> Orchard	<input type="checkbox"/> Nursery	<input type="checkbox"/> Pasture
<input type="checkbox"/> Cotton	<input type="checkbox"/> Sod/Turf Grass	<input type="checkbox"/> Grapes	<input type="checkbox"/> Other

Double Crop?  Yes  No

[Ok](#)

[Close](#)

←
→

Irrigation Report

### Part B: Monthly Water Use Summary (Report Year "2015" )

Report all amounts in units of **1000 gallons**

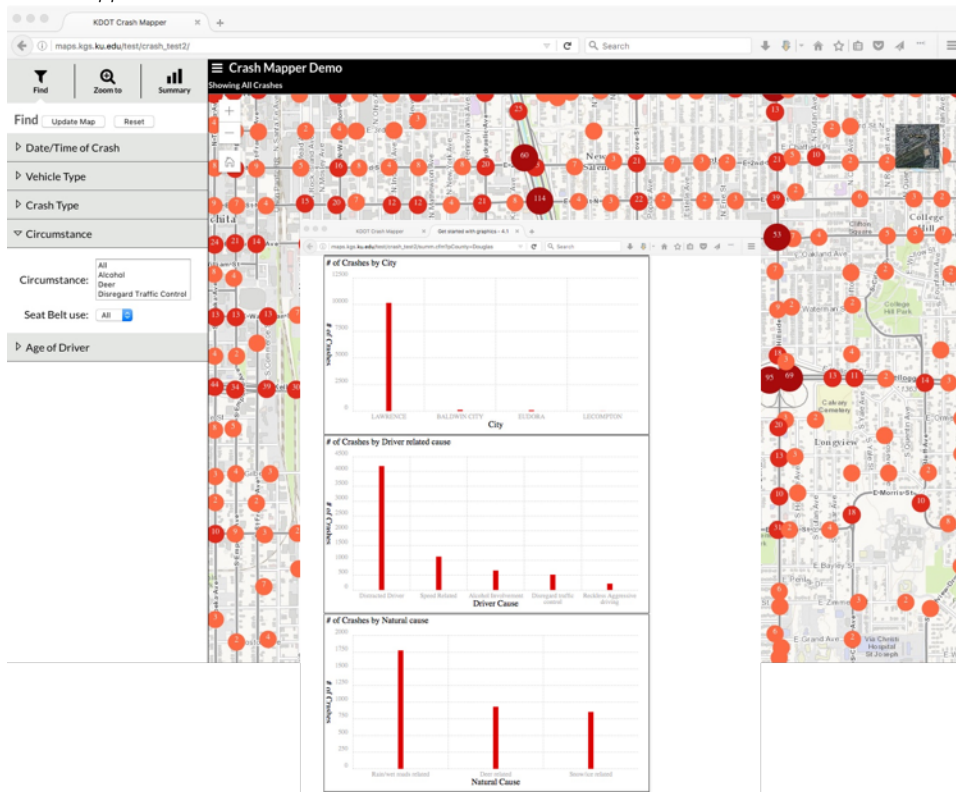
	Column 1 Raw Water Diverted	Column 2 Water Purchased From All Sources	Column 3 Water Sold to Public Suppliers	Column 4 Water Sold to Industrial, Stock Bulk Customers	Column 5 Water Sold to Residential and Commercial Customers	Column 6 Metered Water Provided Free	Column 7 Unaccounted for Water (will be calculated)	Column 8 % of Unaccounted for Water (will be calculated)
Jan								
Feb								
Mar								
Apr								
May								
Jun								
Jul								
Aug								
Sep								
Oct								
Nov								
Dec								

Monthly Water Use Summary

## CRASH MAPPER

In collaboration with the Kansas Department of Transportation (KDOT) and the Traffic Records Coordinating Council (TRCC), DASC is working on a two-phased project related to crash records. Phase one, Crash Map Data Enhancement, is an effort to determine locations for crash records provided to KDOT. Crash records are typically submitted by local law enforcement jurisdictions and the Kansas Highway Patrol (KHP) as a distance from a road intersection. DASC receives new crash records from KDOT on a nightly basis and runs them through address standardization and geocoding routines to find the proper location. Results deemed sufficiently accurate are returned to KDOT the next morning. Phase two of the project involves the development of a web-based mapping application and custom reporting tool (available via REST endpoint) to query and display these crash records. This application is currently under review by KDOT and DASC will incorporate the feedback into a final version for public release. DASC will continue to work on crash records not yet geographically located as data scrubbing techniques are improved and updates to NG911 roads data become available.

### *Crash Mapper*



## BASE FLOOD ELEVATION PORTAL

In collaboration with KDA's Division of Water Resources, DASC began development of the Kansas Base Flood Elevation Portal. Once completed, the portal will provide a simple interface for users to request a Base Flood Elevation (BFE) report where data is available within Zone A floodplains in Kansas. The portal will also provide DWR staff with a series of administrative tools to help facilitate communication with users and manage content:

- Document generation
- Document routing
- Administrative dashboard
- Data management
- User management

As of October 1, 2017, all Zone A BFE requests will be routed through the portal and will greatly reduce the staff time required to generate, evaluate, and process such requests.

The screenshot displays the Kansas Base Flood Elevation Portal interface. The top navigation bar includes links for Home, About, Admin, Map, Request History, User Profile, and Log Out. Below the navigation bar, there is a search section titled "Search Requests by Person or Map ID" with a search button and a dropdown menu for "View all" and "Pending". To the right of the search section is an "Update Requests" form with fields for "Map Obj:", "BFE", and "Letter Text:". Below the search section is a table of pending requests with columns for Status, User, Map Obj, Address, BFE Max, and LIDAR Min. The table lists several pending requests, all with a status of "Pending" and a user of "Martin Kor".

Status	User	Map Obj	Address	BFE Max	LIDAR Min
Pending	David Alfano	25079	1820th douglas	1203.00	1201.60
Pending	Dane Balli				
Pending	Dane Balli				
Pending	Dane Balli				
Pending	Dane Balli				
Pending	Kevin Beak				
Pending	Lisa Davie				
Pending	Martin Kor				
Pending	Martin Kor				
Pending	Martin Kor				
Pending	Martin Kor				
Pending	Martin Kor				
Pending	Martin Kor				
Pending	Martin Kor				
Pending	Martin Kor				
Pending	Martin Kor				
Pending	Martin Kor				

The bottom section of the screenshot shows a map view with a red outline around a property. The map includes a "Switch Basemap" button and a "Draw Property" section with a "Area of Interest" button. Below the map are several toolbars: "Find Address" with a search input, "Layers/Legend", "Search Twp, Rng, Sec", and "Measurement". The map is powered by Microsoft ESRI.

## STREAMLINED SALES TAX PROJECT (SSTP)

In Kansas, as in many states, retailers must use destination-based sourcing rules to correctly identify the local sales tax to charge on a retail sales transaction. Under the destination-based sourcing rules, sales generally are sourced to the location where the purchaser receives the item sold. Retailers who ship or deliver sold items to their customers' locations are required to collect the local sales tax in effect where delivery is made (source - [www.ksrevenue.org/sstpoverview.html](http://www.ksrevenue.org/sstpoverview.html)).

In collaboration with KDOR, DASC supports the Kansas SSTP project by developing and maintaining the databases, web services, and workflows necessary for operating the streamlined sales tax portal, and participating in the National Streamlined Sales Tax Compact. This project requires the integration of multiple tabular and geographic data sources from federal, state, and local government, and the US Postal Service, to produce the rates and boundaries file on a quarterly basis. At the core of the project is a series of data integration and geoprocessing services that tie the data together. DASC has leveraged this project to build relationships with state agencies and local government mapping programs to update and improve the quality of the database.

The screenshot shows a web browser window displaying the Kansas Department of Revenue's Division of Taxation website. The page title is "Kansas Sales and Use Tax Address Tax Rate Locator". The navigation menu includes links for HOME, PERSONAL TAX, BUSINESS TAX, FORMS, ELECTRONIC SERVICES, MISCELLANEOUS, and CONTACT TAX ABOUT. The main content area features a blue header with the text "Kansas Sales and Use Tax Address Tax Rate Locator". Below this, there is a section titled "Lookup Tax Rate By" with options for "Address" and "Zip + 4". There are also sections for "Tax Databases" (Upload Retailer Databases, Web Services) and "Registration, Specifications and Information" (Register now, Upload/Return File Format Information, Web Services Description Language (WSDL)). A sidebar on the right contains a "FILE YOUR TAXES ONLINE!" section with a "Webfile Now" button and a "RELATED LINKS" section with links for "Check on your refund", "Personal tax forms", "Resolve tax issues", "Frequently asked questions", "Business topics", "Policy library", and "Department of Revenue home page". The footer includes copyright information for 2017 and a mobile app promotion.

## WEB SERVICES

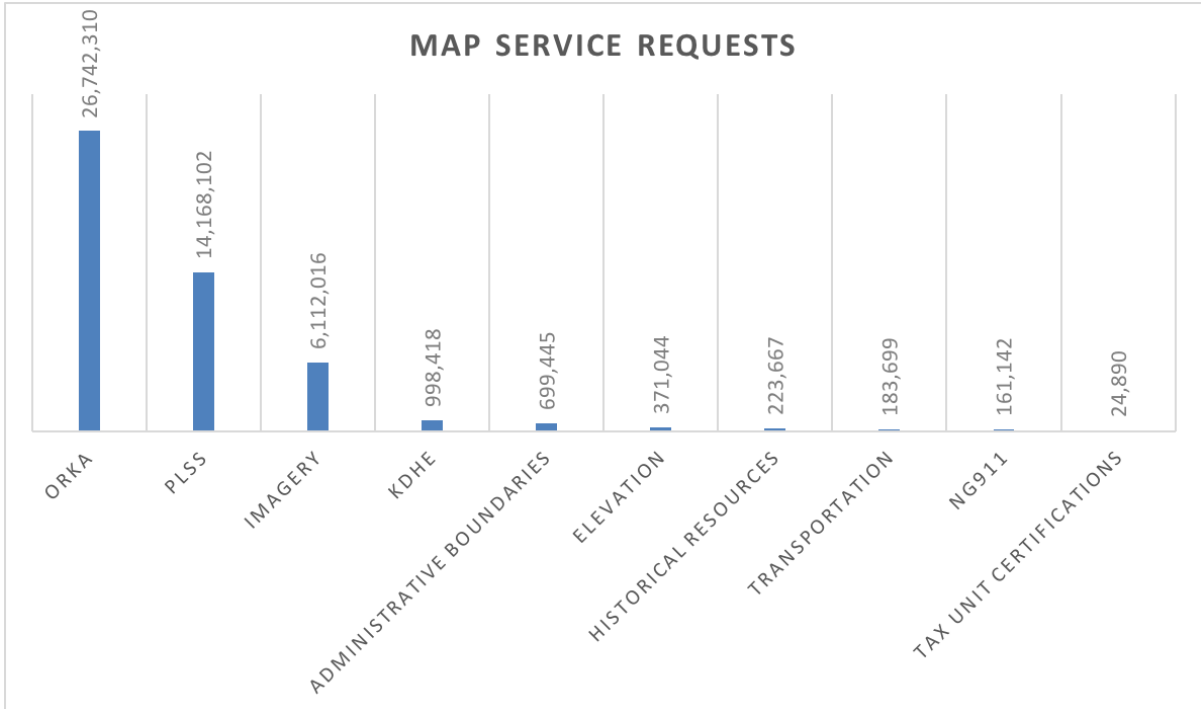
During FY2017, DASC provided application development and hosting services for the following projects:

- Kansas NG911 Program Portal – 911 Coordinating Council
- Kansas Water Use Report – Kansas Department of Agriculture
- Open Records for Kansas Appraisers – Kansas Department of Revenue
- Streamlines Sales Tax Database & Web Services – Kansas Department of Revenue
- Crash Mapper – Kansas Department of Transportation
- Public Water Supply Mapping Portal – Kansas Water Office
- Historical Property Inventory – Kansas State Historical Society
- Archeological Sites Inventory – Kansas State Historical Society
- Fish & Wildlife Contracts and Reporting application – Kansas Department of Wildlife, Parks, & Tourism
- Map service hosting for KDHE public applications
- Database & Content Management System - Northeast Kansas Environmental Services

## MAP SERVICE STATISTICS

During FY2017, DASC hosted over 350 map services that received nearly 50 million requests.

*Top 10 Map Services – total number of requests per service*



## FUTURE DIRECTION

### Kansas GIS Initiative Strategic Planning:

- Updated strategic plan focusing on primary components of the Kansas GIS Initiatives, including, but not limited to:
  - Kansas GIS Policy Board and related data committees
  - Kansas One Map
  - DASC

### Esri Enterprise License Agreement (ELA) management:

- Work with Esri and state government stakeholders to define agreement requirements
- Coordinate with OITS leadership on agreement renewal
- Facilitate access to ELA products by developing software quotes, distributing software media and license files, and providing technical support
- Administer enterprise-level ArcGIS online

### Database & Application Development Activities:

- Kansas Floodplain Mapping Portal – Kansas Department of Agriculture
  
- KWO Public Water Supply (PWS) Mapping Portal
  
- Statewide Tax Units Database v2018 update
  
- Streamlined Sales Tax Database:
  - Incorporate local GIS data updates made available through NG911 GIS Enhancement project
  
- ORKA:
  - Statewide parcel geodatabase and web service
  - ORKA version 4.0 release
  - Completion of statewide CRS table merge and web services
  
- Kansas Water Use Report:
  - Public release for 2018 reporting period
  - Application enhancements based on user input
  - Enhance to executive dashboard
  
- Crash Mapper:
  - Complete Crash Mapper application and associated web services
  - Complete work on data enhancement activities
  - Application and data maintenance services
  
- NG911 Program Support Activities:
  - Development and management of the NG911 Program Portal

- Management of statewide imagery database – data distribution, map service user account management
- Development and management of map templates for hosted call handling solution mapping interface (Vesta Locate)
- Production and deployment of statewide imagery Network Attached Storage (NAS) devices in support of each Public Safety Answering Point (PSAP) cutover
- Coordination and outreach activities
- Program and policy development
  
- Coordination & Outreach Activities:
  - Continue to promote the Kansas GIS Initiative and DASC services at conferences and events across the state
    - KAM annual conference
    - MAGIC symposium
    - Kansas Association of Counties
    - Kansas APCO
    - GIS Day events
  - Serve on GIS-related committees
  - 2018 MAGIC GIS Clearinghouse Summit
  - MAGIC GIS Steering Committee
  - NSGIC State Representative