

# MSDIS Update – First Quarter 2018

## New Data

Since January 01, MSDIS has add the following datasets to its distribution:

- 2017 Public Schools
- 2017 Public Schools for the Severely Disabled
- 2018 Adult Daycare Facilities\*
- 2018 Federally Qualified Health Centers\*
- 2018 Hospitals\*
- 2018 Hospitals (March Update)\* °
- 2018 WIC Satellite Offices\*
- 2018 WIC Satellite Offices (March Update)\* °
- 2018 Local Public Health Agencies\* °
- 2018 Public Drinking Water Districts
- 2018 MoDOT Roads (March Update)

## New County Extent LiDAR

- Bates
- Barton
- Benton
- Cedar
- Dade
- Henry
- Johnson
- Lawrence
- Moniteau
- Newton
- Pettis
- Vernon

\* The addition of these datasets is significant due to the fact that MSDIS has never before been allowed to distribute DHSS data. In the past, MSDIS has only shared the metadata of DHSS spatial data. MSDIS is thrilled to finally be able to serve healthcare related data out to the Missouri GIS user community.

° These layers were added after April 01 and, thus, technically did not occur during the first quarter of 2018.

## Server Migration

MSDIS operations were migrated to the virtual servers that had been under development for approximately four months. While the migration was originally intended to be staggered, with Imagery migrating first and Web migrating second once a strategy had been set up to replace the ftp, a complete network failure on 30 March 2018 necessitated swapping both servers at the same time. Preparations were already completed for the migration of Imagery, but not for Web. As such, data and imagery services were made immediately available once the DNS switch had been completed, however all data downloads apart from those sourced to the Washington University ftp were unavailable.

## Data Downloads

In the days that followed the server migration, University of Missouri IT staff worked towards setting up and deploying a new shared virtual space to replace the ftp. The data share, which has been named the MSDIS Archive, was made into a publicly available file index and data downloads have resumed. The organization of the Archive is still under development to streamline data discovery and reduce the number of directories a user must browse through in order to find relevant data. The archive can be accessed at the following URL: <http://msdis-archive.missouri.edu/archive/>

## Vector Data Services

In addition to the server migration and the new data downloads space, MSDIS has deployed new MapServer services via the virtual MSDIS WebServer. In the past, MSDIS only deployed a handful of data layers as interactive services, relying primarily on data downloads to distribute spatial information. As GIS users have become increasingly accustomed to working with and through ArcGIS Online and using web-based data services, MSDIS has largely failed to keep pace. These new data services, which will feature the most recent, up-to-date data layers seeks to resolve this deficiency.

## General MSDIS Web Page Changes

With the drastic overhaul of MSDIS' data distribution, and the retirement of the aging ftp technology, virtually all of the data download links on the MSDIS web page were disabled. Unfortunately, because MSDIS data download links are all hardcoded, this collapse was a common worry, even before the server migration or the network failure. In order to reduce the potential impact that this problem could cause in the future, all hardcoded data links have been removed from the MSDIS webpage. GIS users no longer have the option of downloading data from the ftp director OR the Data by Theme page OR the Data List page OR the New Data page. All data downloads are executed from the MSDIS Archive. The only exception to this rule is the MSDIS homepage, which provides links to download only the most recent additions to MSDIS.

Several redundant and/or unnecessary pages have also been removed entirely. The Geoportal and Geoportal Help pages have been removed. The News page has been removed. The Metadata Guide has been removed until such time as a replacement that does not mention the Geoportal can be authored. Additionally, the Web Services dropdown menu has swapped positions with the Data Download dropdown menu in order to highlight the new emphasis on online service.

## MSDIS Open Data Portal

MSDIS has been exploring the possibility of using the ESRI Open Data platform as a replacement for the Geoportal. The Open Data Portal is more configurable than the Geoportal, the design is cleaner, and data discovery is easier. Metadata publication is easier with the Open Data platform as it does not require certain fields to be completed as the Geoportal did.

The Open Data Portal requires either a feature data service or a hosted featured data service to publish data. The data service is published from an ArcGIS Server installation, imported to ArcGIS Online, and (from ArcGIS Online) shared to Open Data. This was additional justification for publishing more MapServer services. By using services to feed the Open Data Portal instead of uploading data to ArcGIS Online, MSDIS expands its utility to GIS users and saves a substantial amount of ArcGIS Online credits and, by extension, money. The MSDIS Open Data Portal can be found at the following URL: <https://data-msdis.opendata.arcgis.com/>

## Outreach

On 29 March 2018, MSDIS assisted with the hosting and set-up of in-person training for Local Update of Census Addresses (LUCA) operation in Columbia, MO.

## MSDIS Usage Stats

As has been done in the past, MSDIS has completed its analysis of quarterly traffic.

### First Quarter 2018

Note: The log results for First Quarter 2018 are artificially low. When the physical MSDIS servers were taken offline by the network failure, the logs for March 2018 were lost. The January and February 2018 logs had already been copied to a secure backup. These records, therefore, are technically only for January, February, and the last two days of March 2018. Records do appear for days between 28 February and 30 March. Those hits were accumulated during the pre-deployment testing.

#### Hits by Month

Month	Hits	Page views
Jan-18	3831350	3827317
Feb-18	3745122	3734059
Mar-18	89795	87408

#### Top Five Hits by Directory

Pages/directories	Hits	Hits (%)	Page views
/arcgis/services/MSDIS/	2734646	71.2	2734646
/arcgis/services/LGov/	812237	21.2	812237
/arcgis/services/Map/	194560	5.1	194560
/arcgis/services/2015_MO_18inch_Imagery/	42807	1.1	42807
/arcgis/services/LiDAR/	41901	1.1	41901

#### Top Five Hits within MSDIS Directory

Pages/directories	Hits	Hits (%)	Page views
/arcgis/services/MSDIS/Missouri_Statewide_Imagery_2015/	863961	31.6	863961
/arcgis/services/MSDIS/NAIP2016/	727197	26.6	727197
/arcgis/services/MSDIS/NAIP2014/	280245	10.2	280245
/arcgis/services/MSDIS/DOQQ2008/	227085	8.3	227085
/arcgis/services/MSDIS/QUAD24K/	123576	4.5	123576

### Top Ten Hits by Region

Region	Hits	Hits (%)	Page views
United States/MO/	5160662	67.3	5152392
United States/(unknown city)	604979	7.9	604547
(unknown country)/(unknown city)	329816	4.3	329717
United States/CO/	316461	4.1	316442
United States/AR/	243991	3.2	243953
United States/IL/	182476	2.4	178405
United States/CA/	165969	2.2	165910
Canada/ON/	81400	1.1	81353
United States/TX/	55309	0.7	55293
United States/KS/	51098	0.7	51082

### Top Ten Hits by City

City	Hits	Hits (%)	Page views
United States/MO/Jefferson City	2245512	29.3	2244126
United States/MO/Maryland Heights	776962	10.1	776950
United States/(unknown city)	604979	7.9	604547
United States/MO/Saint Louis	530629	6.9	529984
United States/MO/Lohman	523158	6.8	523011
(unknown country)/(unknown city)	329816	4.3	329717
United States/CO/Fort Collins	280688	3.7	280683
United States/AR/Russellville	224844	2.9	224813
United States/MO/Columbia	134532	1.8	128804
Canada/ON/Ottawa	81185	1.1	81138

### Top Ten Hits by Client IP

Client IP	Hits	Hits (%)	Page views
168.166.124.100	1011420	13.2	1010313
68.191.196.74	774481	10.1	774473
168.166.80.243	681302	8.9	681128
168.166.48.1	285555	3.7	285487
173.218.180.174	224823	2.9	224792
168.166.193.254	213037	2.8	213037
168.166.80.248	210169	2.7	210169
168.166.48.52	121482	1.6	121445
12.28.56.202	86248	1.1	86137
168.166.80.237	59247	0.8	59247

## Fourth Quarter 2017

### Hits by Month

Month	Hits	Page views
Oct-17	3349947	3346064
Nov-17	3316126	3309876
Dec-17	3094272	3090428

### Top Five Hits by Directory

Pages/directories	Hits	Hits (%)	Page views
/arcgis/rest/services/LGov/	3269672	67.5	3268868
/arcgis/rest/services/MSDIS/	1432890	29.6	1432890
/arcgis/rest/services/Joplin/	83891	1.7	83887
/arcgis/rest/services/LiDAR/	42260	0.9	42255
/arcgis/rest/services/2015_MO_18inch_Imagery/	5741	0.1	5734

### Top Five Hits within LGov Directory

Pages/directories	Hits	Hits (%)	Page views
/arcgis/rest/services/LGov/EWGateway2015_6inch/	874144	26.7	874144
/arcgis/rest/services/LGov/EasternMissouri18inch/	637089	19.5	637089
/arcgis/rest/services/LGov/StFrancois_49composite/	356529	10.9	356529
/arcgis/rest/services/LGov/WesternMissouri18inch/	342052	10.5	341248
/arcgis/rest/services/LGov/Perry_49composite/	330636	10.1	330636

### Top Ten Hits by Region

Region	Hits	Hits (%)	Page views
United States/MO/	6050395	62	6046109
United States/(unknown city)	777119	8	776608
(unknown country)/(unknown city)	451933	4.6	451800
United States/CO/	425711	4.4	425677
United States/CA/	425173	4.4	423780
United States/AR/	355563	3.6	355544
United States/IL/	245436	2.5	245336
Canada/ON/	130710	1.3	130636
United States/TX/	86028	0.9	86010
United States/NJ/	79582	0.8	75029

### Top Ten Hits by City

City	Hits	Hits (%)	Page views
United States/MO/Jefferson City	3019350	30.9	3018831
United States/(unknown city)	777119	8	776608
United States/MO/Saint Louis	629569	6.5	628512
United States/MO/Lohman	485817	5	485762
United States/MO/Maryland Heights	454296	4.7	454296
(unknown country)/(unknown city)	451933	4.6	451800
United States/CO/Fort Collins	405939	4.2	405932
United States/AR/Russellville	320719	3.3	320700
Canada/ON/Ottawa	129052	1.3	128978
United States/MO/Columbia	124072	1.3	121856

### Top Ten Hits by Client IP

Client IP	Hits	Hits (%)	Page views
168.166.124.100	1434167	14.7	1433965
168.166.80.243	936693	9.6	936521
68.191.196.74	449191	4.6	449191
173.218.180.174	320712	3.3	320693
168.166.193.254	280874	2.9	280874
168.166.80.248	239875	2.5	239875
168.166.48.52	172276	1.8	172251
168.166.48.1	162202	1.7	162185
198.102.36.250	82288	0.8	82286
168.166.48.197	60454	0.6	60447

## Third Quarter 2017

### Hits by Month

Month	Hits	Page views
Jul-17	3275587	3270953
Aug-17	3430155	3425843
Sep-17	3134940	3130773

### Top Five Hits by Directory

Pages/directories	Hits	Hits (%)	Page views
/ArcGIS/rest/services/LGov/	3104151	66.2	3104150
/arcgis/rest/services/MSDIS/	1518967	32.4	1518967
/arcgis/rest/services/LiDAR/	46209	1	46199
/arcgis/rest/services/Joplin/	4465	0.1	4465
/arcgis/rest/services/2015Flood/	3156	0.1	3156

### Top Five Hits within LGov Directory

Pages/directories	Hits	Hits (%)	Page views
/arcgis/rest/services/LGov/EWGateway2015_6inch/	823902	26.5	823902
/arcgis/rest/services/LGov/EasternMissouri18inch/	561128	18.1	561128
/arcgis/rest/services/LGov/StFrancois_49composite/	391957	12.6	391957
/arcgis/rest/services/LGov/WesternMissouri18inch/	337218	10.9	337218
/arcgis/rest/services/LGov/Perry_49composite/	311394	10	311394

### Top Ten Hits by Region

Region	Hits	Hits (%)	Page views
United States/MO/	6148049	62.5	6143408
United States/(unknown city)	684918	7	684611
United States/AR/	565705	5.7	565693
United States/CO/	503409	5.1	503390
(unknown country)/(unknown city)	470520	4.8	470428
United States/CA/	304010	3.1	303961
United States/IL/	212550	2.2	212326
Canada/ON/	97857	1	97835
United States/TX/	83349	0.8	83319
United States/KS/	71661	0.7	71563

### Top Ten Hits by City

City	Hits	Hits (%)	Page views
United States/MO/Jefferson City	3665201	37.2	3664786
United States/(unknown city)	684918	7	684611
United States/MO/Saint Louis	625887	6.4	625296
United States/AR/Russellville	533611	5.4	533601
United States/CO/Fort Collins	483562	4.9	483554
(unknown country)/(unknown city)	470520	4.8	470428
United States/MO/Lohman	325881	3.3	325166
United States/MO/Columbia	109540	1.1	107387
United States/MO/O Fallon	108016	1.1	107958
Canada/ON/Ottawa	97834	1	97812

### Top Ten Hits by Client IP

Client IP	Hits	Hits (%)	Page views
168.166.124.100	1644738	16.7	1644383
168.166.80.243	1446682	14.7	1446658
173.218.180.174	533611	5.4	533601
168.166.193.254	251062	2.6	251062
168.166.80.248	161744	1.6	161744
168.166.48.1	143949	1.5	143907
168.166.48.237	79706	0.8	79209
12.129.64.197	60795	0.6	60795
168.166.80.241	59741	0.6	59721
71.11.128.203	58402	0.6	58402

## Second Quarter 2017

### Hits by Month

Month	Hits	Page views
Apr-17	3074416	3069563
May-17	3154697	3149010
Jun-17	3826122	3820880

### Top Five Hits by Directory

Pages/directories	Hits	Hits (%)	Page views
/arcgis/services/MSDIS/	3261504	62.3	3261504
/arcgis/services/LGov/	1262190	24.1	1262190
/arcgis/services/Map/	421190	8.1	421190
/arcgis/services/Meramec2017flood/	126285	2.4	126285
/arcgis/services/LiDAR/	93209	1.8	93209

### Top Five Hits within MSDIS Directory

Pages/directories	Hits	Hits (%)	Page views
/arcgis/services/MSDIS/NAIP2016/	826215	25.3	826215
/arcgis/services/MSDIS/NED10M/	538124	16.5	538124
/arcgis/services/MSDIS/NAIP2014/	465665	14.3	465665
/arcgis/services/MSDIS/DOQQ2008/	326268	10	326268
/arcgis/services/MSDIS/MOConservationSites2016/	280885	8.6	280885

### Top Ten Hits by Region

Region	Hits	Hits (%)	Page views
United States/MO/	6455532	64.2	6450842
United States/AR/	745060	7.4	744989
United States/(unknown city)	611218	6.1	610802
(unknown country)/(unknown city)	442312	4.4	441437
United States/CO/	390324	3.9	390295
United States/CA/	270405	2.7	270331
United States/IL/	210325	2.1	209913
United States/AZ/	106690	1.1	106655
Italy/Trentino-Alto Adige/	86529	0.9	86489
Canada/ON/	85445	0.8	85418

### Top Ten Hits by City

City	Hits	Hits (%)	Page views
United States/MO/Jefferson City	3703245	36.8	3702661
United States/AR/Russellville	705030	7	704975
United States/(unknown city)	611218	6.1	610802
United States/MO/Saint Louis	610874	6.1	609774
United States/MO/Columbia	487386	4.8	485730
(unknown country)/(unknown city)	442312	4.4	441437
United States/CO/Fort Collins	368281	3.7	368265
United States/MO/Lohman	283060	2.8	282710
United States/AZ/Fort Huachuca	94518	0.9	94487
Italy/Trentino-Alto Adige/Trento	86529	0.9	86489

### Top Ten Hits by Client IP

Client IP	Hits	Hits (%)	Page views
168.166.80.243	1671372	16.6	1671304
168.166.124.100	1521023	15.1	1520544
173.218.180.174	705024	7	704971
216.106.83.2	298905	3	298886
168.166.193.254	246680	2.5	246677
168.166.80.248	135194	1.3	135194
168.166.48.1	99729	1	99669
168.166.48.245	89815	0.9	89550
193.205.210.74	86529	0.9	86489
216.106.0.188	67380	0.7	67374

## First Quarter 2017

### Hits by Month

Month	Hits	Page views
Jan-17	2934901	2931327
Feb-17	2916211	2912250
Mar-17	3888081	3880046

### Top Five Hits by Directory

Pages/directories	Hits	Hits (%)	Page views
/arcgis/rest/services/LGov/	2948080	66.6	2948080
/arcgis/rest/services/MSDIS/	1350421	30.5	1350421
/arcgis/rest/services/Joplin/	69783	1.6	69783
/arcgis/rest/services/LiDAR/	47562	1.1	45322
/arcgis/rest/services/StLouisHistoricalAerialPhotos/	4132	0.1	4132

### Top Five Hits within LGov Directory

Pages/directories	Hits	Hits (%)	Page views
/arcgis/rest/services/LGov/EWGateway2015_6inch/	789501	26.8	789501
/arcgis/rest/services/LGov/EasternMissouri18inch/	576278	19.5	576278
/arcgis/rest/services/LGov/Perry_49composite/	395530	13.4	395530
/arcgis/rest/services/LGov/StFrancois_49composite/	322354	10.9	322354
/arcgis/rest/services/LGov/WesternMissouri18inch/	320728	10.9	320728

### Top Ten Hits by Region

Region	Hits	Hits (%)	Page views
United States/MO/	6045768	62.1	6041143
United States/(unknown city)	689180	7.1	688940
(unknown country)/(unknown city)	581306	6	581068
United States/AR/	568567	5.8	568528
United States/CO/	444243	4.6	444108
United States/IL/	297658	3.1	297537
United States/CA/	278425	2.9	278326
United States/AZ/	93898	1	93813
Canada/ON/	85646	0.9	85602
United States/NJ/	72850	0.7	66676

### Top Ten Hits by City

City	Hits	Hits (%)	Page views
United States/MO/Jefferson City	3572582	36.7	3571830
United States/(unknown city)	689180	7.1	688940
United States/MO/Saint Louis	619739	6.4	618594
(unknown country)/(unknown city)	581306	6	581068
United States/AR/Russellville	534889	5.5	534863
United States/CO/Fort Collins	409661	4.2	409630
United States/MO/Lohman	206516	2.1	206219
United States/MO/Columbia	190373	2	189412
United States/MO/Fulton	94362	1	94255
Canada/ON/Ottawa	83985	0.9	83964

### Top Ten Hits by Client IP

Client IP	Hits	Hits (%)	Page views
168.166.124.100	1698402	17.4	1697775
168.166.80.243	1095433	11.2	1095400
173.218.180.174	534889	5.5	534863
168.166.80.248	449235	4.6	449233
168.166.193.254	192478	2	192478
10.7.67.99	134228	1.4	134225
68.187.8.203	70946	0.7	70946
65.119.141.114	61286	0.6	61275
216.106.0.132	60809	0.6	60809
168.166.48.245	53483	0.5	53384