

Missouri Spatial Data Information Service (MSDIS)

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Missouri Spatial Data Information Service (MSDIS)

- <http://msdis.missouri.edu/>
- Missouri's Geospatial Data Clearinghouse
- But so much more...



Missouri Spatial Data Information Service

Committed to the wise sharing & use of digital spatial information and tabular data sets.



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- WEB SERVICES
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- CONTACT

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Welcome to MSDIS

[Go to Legacy MSDIS Site](#)

MSDIS is the Missouri Spatial Data Information Service, a spatial data retrieval and archival system. GIS technology is emerging worldwide as the standard tool for integrated management of geographic information. Geographic information, often referred to as spatial information, can be defined as any piece of information that can be referenced by an x, y location. GIS technology enables managers and users of geographic information to achieve higher levels of information integration and to perform more complex analyses than are practically feasible in manual environments.

MSDIS is responsible for data storage and access, standardization of both digital and tabular data, creation of the data dictionary, compilation of metadata, and statewide GIS user information networks.

Where is MSDIS Located

38,945172,-92.323899 [\[Driving Directions\]](#) [\[Location Map\]](#)

This service is located at the [Geographic Resources Center \(GRC\)](#) at the [University of Missouri - Columbia](#). This site is the ideal place for such a service. The University represents a neutral entity within the state so agencies are more inclined to cooperate with a MU-based Center. The University is a Land Grant Institution and lends itself to the service and extension functions that such a service bureau supports. Federal agencies are also looking for places within each state to act as clearinghouses for the data sets created by their representative state affiliates. The MSDIS at MU's Geographic Resources Center meets this need.

The University has resident staff within the GRC with the technical experience to deal with these



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Latest News

[New and Updated Data From MODNR](#)
October 5th, 2011

[New Data Page](#)

[Lake Area Geospatial Symposium 24th Oct 2011](#)
September 30th, 2011

[Information and Registration](#)
[Download PDF Flyer](#)



Missouri Spatial Data Information Service (MSDIS) – Geospatial Services

<http://www.msdis.missouri.edu/index.htm>

- State's Geospatial Data Clearinghouse – free downloadable data
- Geospatial Support for Emergency Events
- GIS education and outreach to local governments
- RSS News Feed for immediate geospatial news
- GIS List server access for Missouri's geospatial user groups (11)
- Geospatial Imagery Services (NAIP & others) - Flight Map
- Geospatial Help Desk services
573-882-6734
- Local Government GIS Startup & Services Page
- Jobs Page – two categories – NFP and commercial
- Links to other geospatial groups and activities (Conferences etc...)



MSDIS - Core Staff Responsibilities...

Tim Haithcoat –
GRC/MSDIS
Director

MSDIS
Mark Duewell –
Program Manager/
/Outreach/Server
Admin

MSDIS
Tom Vought -
Imagery / Server
Admin

MSDIS
Martin Wills –
Web / Server
Admin



My responsibilities...

- Day to day MSDIS operations
- Assist the Director to plan MSDIS' future – then coordinate and implement those plans
- MSDIS Ombudsman –
- User community outreach – particularly LGovs



Other duties as assigned...

- MAGIC Steering Committee Member
- MAGIC Symposium Awards Chair
- MAGIC Clearinghouse Sub-committee Co-Chair
- MOMAPPERS IT sub-committee Chair
- MGISAC Ex-officio Member
- MGISAC Co-Chair – Outreach & Education
- Member of 6 GIS User groups within the state
- Other sub-committee memberships...



Current projects...

- Clearinghouse GeoPortal Implementation
- ArcGIS Server and Imagery Service Implementation
- Missouri FGDC/USGS “Structures” projects
- Updating the Geospatial Data Inventory for Missouri



Accessing MSDIS Data - demonstration...





2010 – 2011 Mid-MO “Structures” Project – Status...

Mark Duewell,

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Chris Stephens,

Missouri Spatial Data Information Service, Lead Data Analyst
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Project Background...

- Project is sponsored by Partnership Funding through FGDC/USGS...
- FGDC Federal share = \$48,733
- MSDIS (University) cost share = \$ 15,670
- Mid-MO RPC cost share = \$10,000
- Total funding = \$74,443
- Two previous project iterations –
SEMO/Bootheel 2007-2008
Boonslick 2008-2009) funded by FGDC/USGS
Cooperative Agreement Program (CAP) funding...

What we're trying to accomplish...

- Data sharing partnerships - designed to be maintained and current across Missouri's landscape...
- Enhanced regional working relationships - promoting geospatial decision support for emergency events and plan
- To prove the premise to state and federal entities that local government data is the not only usually the most accurate but the most timely and can best be maintained locally...



Methods

- Regionalized local review
 - Parallels roles – transportation plans, homeland security plans, economic development plans, etc. (multipurpose)
 - Targeted layers and attributes derived from local review and EOC input (maintenance)
 - Incentives – data, standards, tools, and \$
 - State Homeland Security Grant funding
 - Built on existing relationships and data development partnering from prior FGDC CAP and USGS Partnership grants



Some of the Data Layers Reviewed...

Commercial/Retail

- Wal-Mart Locations – Wal-Mart Corporate

Educational

- Public Schools – Health / DESE
- Private Schools - Health / DESE
- Higher Education Institutions - Health / DESE
- Handicap Public Schools - Health / DESE

Emergency Response / Law Enforcement

- Correctional Facilities – Adult – HSIP Freedom
- Correctional Facilities – Youth - HSIP Freedom
- EMS separate from Fire Stations – TechniGraphics (TGS)
- Fire Stations - TechniGraphics (TGS)
- Law Enforcement Agencies - TechniGraphics (TGS)



Cont...Data Layers Reviewed

Health / Medical

- Daycare – Adult - Health
- Daycare – Child - Health
- Dialysis Clinics - Health
- Hospitals – Health / TechniGraphics (TGS)
- Nursing Homes - Health
- Pharmacies - Health

Public Attractions

- Houses of Worship – Geographic Resources Center

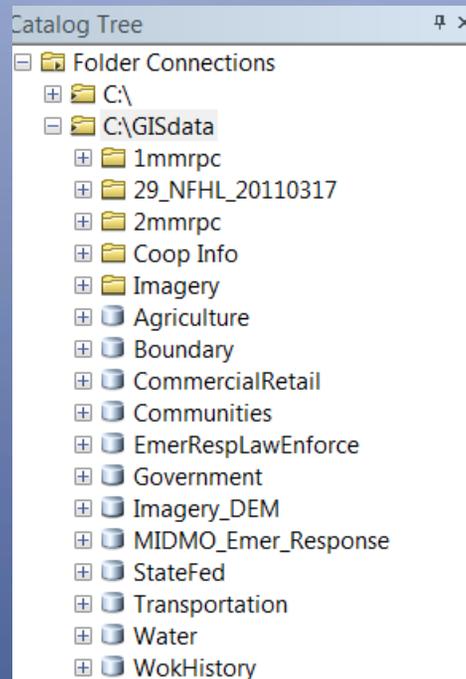
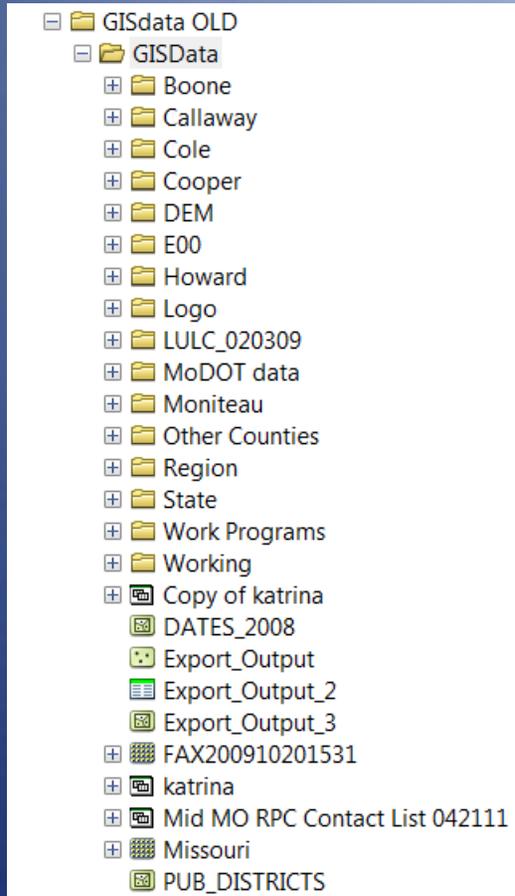
Water

- Wastewater Facilities – Dept of Natural Resources



Mid-MO's Data Development...

Original database – new geodatabase – response database...



Value?

- Emergency events – particularly events with large scale building destruction/damage...
- **Powerful in the hands of local responders but will almost certainly be the best data available to state and federal first responders...**
- Response planning, Decision support, Evacuations, Search & recovery, Damage assessment and remediations

Value added...

- Urban and rural planning
- Public Safety
- Economic development
- Utilities
- Parks & Rec
- Education

Local data to national prominence...

- Web demonstration...

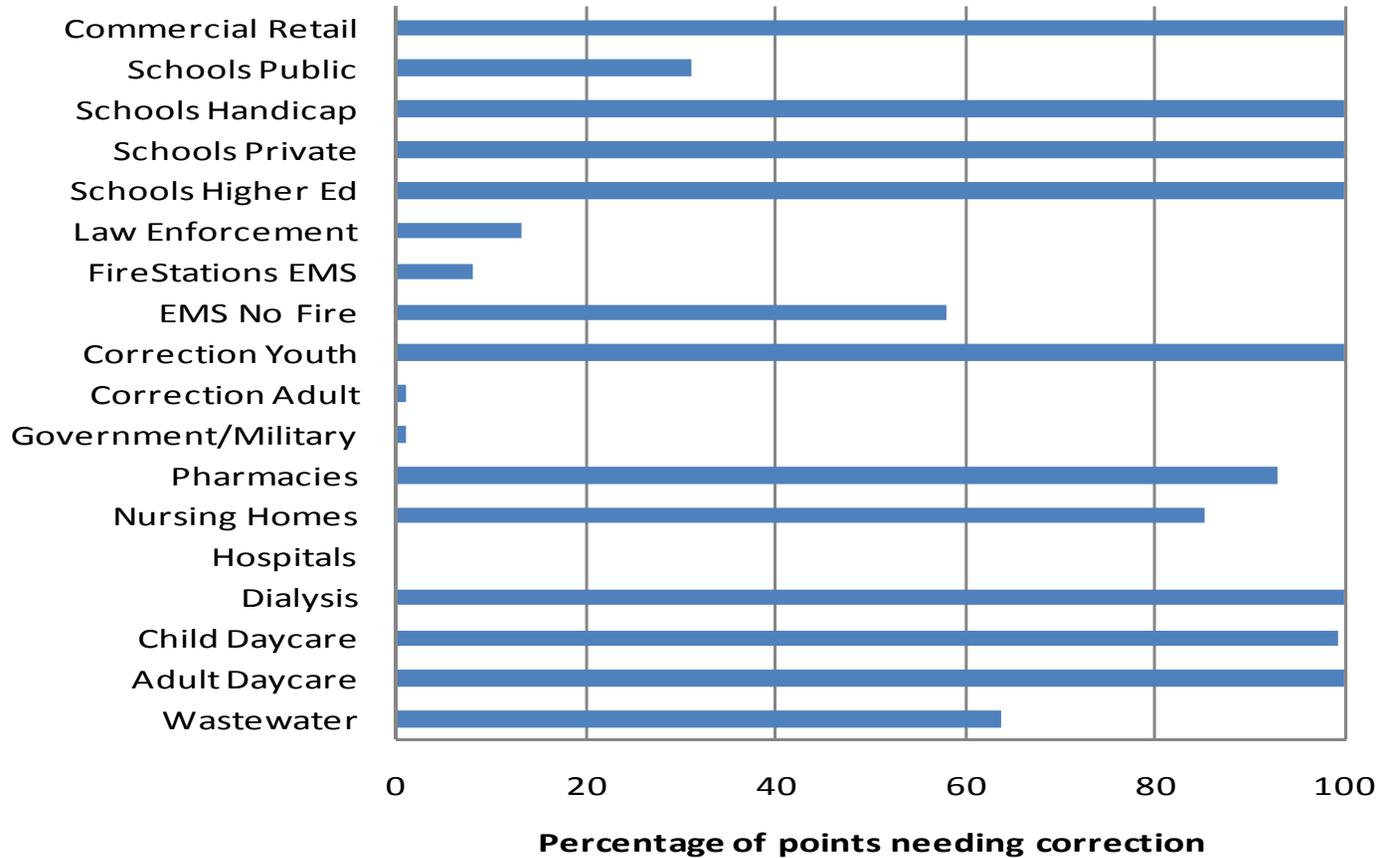


Results

Bootheel									
ORIG	Added	RETURN		Verified	Corrected	Remove	Average(m)	Max(m)	
69	0	69	Wastewater	69	44		172	1970	
565	1	566	Houses of Worship	49	5		137	3391	
3	0	3	Adult Daycare	3	3	0	1042	1577	
160	-1	159	Child Daycare	151	150	4	386	5917	
3	1	4	Dialysis	4	4	0	269	378	
4	0	4	Hospitals	4	0	0	0	0	
45	-1	44	Nursing Homes	41	35		340	4135	
42	0	42	Pharmacies	42	39		148	1203	
6	17	23	Government/Military		1				
1	0	1	Correction Adult	1	0	0	0	0	
2	0	2	Correction Youth	2	2	0	5968	6334	
15	4	19	EMS No Fire	19	11	0	35	233	
64	1	65	FireStations EMS	61	5	2	15	724	
51	0	51	Law Enforcement	45	6	0	13	217	
0	8	8	Schools Higher Ed	8	8				
13	1	14	Schools Private	12	12		318	2097	
3	0	3	Schools Handicap	3	3		135	176	
100	3	103	Schools Public	100	31		116	6737	
5	0	5	Commercial Retail	5	5	0	6	23	

Bootheel Corrections

Bootheel Corrections



Where we're at...

County	data available (source)	file name	location	% Complete
Boone	Parcel polygons (Outsite Source)	Boone_parcel	d:\structures\Structure_data\Midmo.gdb	100%
	Situs Points without fields (Outsite Source)	Boone_situs	d:\structures\Structure_data\Midmo.gdb	100%
Callaway	Parcel polygons (Outsite Source)	Callaway_Parcel	d:\structures\Structure_data\Midmo.gdb	100%
	Situs Points without fields (Outsite Source)	Callaway_Situs	d:\structures\Structure_data\Midmo.gdb	100%
	Structure polygons with fields (MSDIS)	Callaway_footprints_MSDIS	d:\structures\Callaway\Callaway_Structures.gdb	100%
	Structure points with fields (MSDIS)	Callaway_points_MSDIS	d:\structures\Callaway\Callaway_Structures.gdb	100%
Cole	Situs Points without fields (Outsite Source)	Cole_Situs	d:\structures\Structure_data\Midmo.gdb	100%
	Parcel polygons (Outsite Source)	Cole_parcel	d:\structures\Structure_data\Midmo.gdb	100%
	Structure Points with fields (MSDIS)	Cole_structure_points	d:\structures\Cole\Cole_structures.gdb	100%
	Structure Polygons with fields (MSDIS)	Cole_structure_polygons	d:\structures\Cole\Cole_structures.gdb	100%
Cooper	Parcel polygons (Outsite Source)	Cooper_parcel	d:\structures\Structure_data\Midmo.gdb	100%
	Structure polygons with fields (MSDIS)	Cooper_footprints	d:\structures\Structure_data\Midmo.gdb	100%
	Situs Points with fields (MSDIS)	Cooper_Situs	d:\structures\Structure_data\Midmo.gdb	100%
Howard	Parcel polygons (Outsite Source)	Howard_parcel	d:\structures\Structure_data\Midmo.gdb	100%
	Structure polygons with fields (MSDIS)	Howard_footprints	d:\structures\Structure_data\Midmo.gdb	100%
	Situs Points with fields (MSDIS)	Howard_Situs	d:\structures\Structure_data\Midmo.gdb	100%
Moniteau	Parcel polygons (Outsite Source)	Moniteau_parcel	d:\structures\Structure_data\Midmo.gdb	100%
	Address Points without fields (Outsite Source)	Moniteau_adress_points	d:\structures\Structure_data\Midmo.gdb	100%
	Structure polygons with address info (Outsite Source) HAS ERRORS	Moniteau_structures	d:\structures\Structure_data\Midmo.gdb	100%
	Structure polygons with fields (MSDIS)	Moniteau_Footprints_MSDIS	d:\structures\Moniteau\Moniteau_Structures.gdb	100%
	Structure points with fields (MSDIS)	Moniteau_Points_MSDIS	d:\structures\Moniteau\Moniteau_Structures.gdb	100%
County	Data In Progress	file name	location	
Boone	Structure Points with fields (MSDIS)	Boone_points_MSDIS	d:\structures\Boone\Boone_structures_10.gdb	4%
	Structure Polygons with fields (MSDIS)	Boone_footprints_MSDIS	d:\structures\Boone\Boone_structures_10.gdb	4%
Dunklin	Structure Points with fields (MSDIS)	Missouri_structure_points	d:\structures\Dunklin\Bootheel_gdb	85%
	Structure Polygons with fields (MSDIS)	Missouri_structure_footprints	d:\structures\Dunklin\Bootheel_gdb	85%
	Planned			
Cooper	Structure points with fields (MSDIS)			
	Structure polygons with fields (MSDIS)			
Howard	Structure points with fields (MSDIS)			
	Structure polygons with fields (MSDIS)			



Where we're at – cont...

- Point (Locations) and Polygon (building footprints) generation workforce - 2 student interns and one Research Analyst
- Requested from FGDC/USGS a “No cost” extension till December 31st, 2011 to finalize project (3 month extension).
- Final review of data generated or corrected by Mid-MO will hopefully start at the end of October – then – upon approval – data will be made available to all local participants first – then eventually SEMA and USGS.





MSDIS - Support of Recent (2011) Missouri Disaster Events...

Mark Duewell – MSDIS Program Manager

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<http://www.msdis.missouri.edu/>

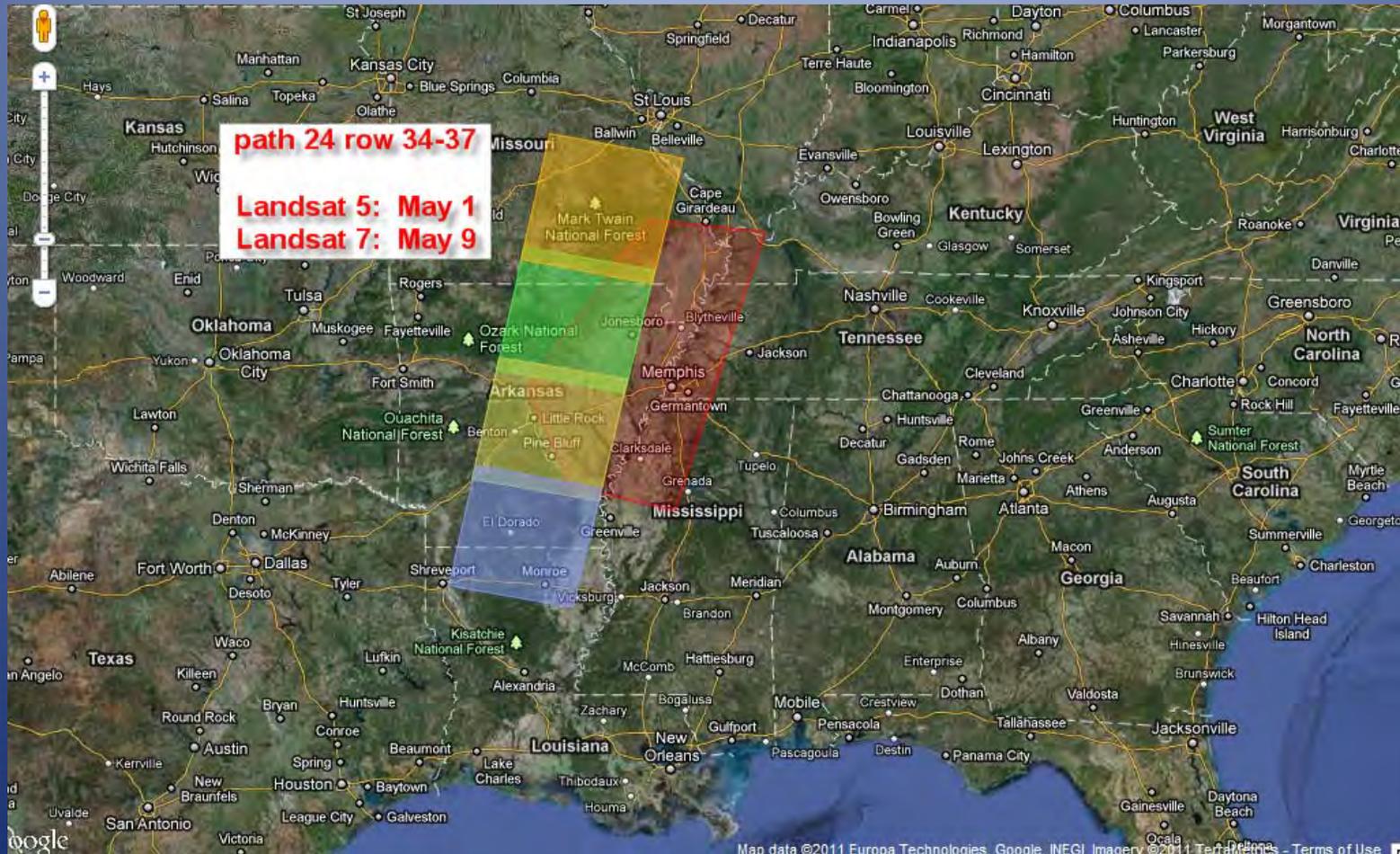


Disaster Event Support

- MSDIS provided data and services support for the following:
 - Flooding events...
 - Late April – early May (Southeast, Mississippi River).
 - Late June – early July (Northwest, Missouri River).
 - Tornadic events:
 - St. Louis, MO
 - Joplin, MO



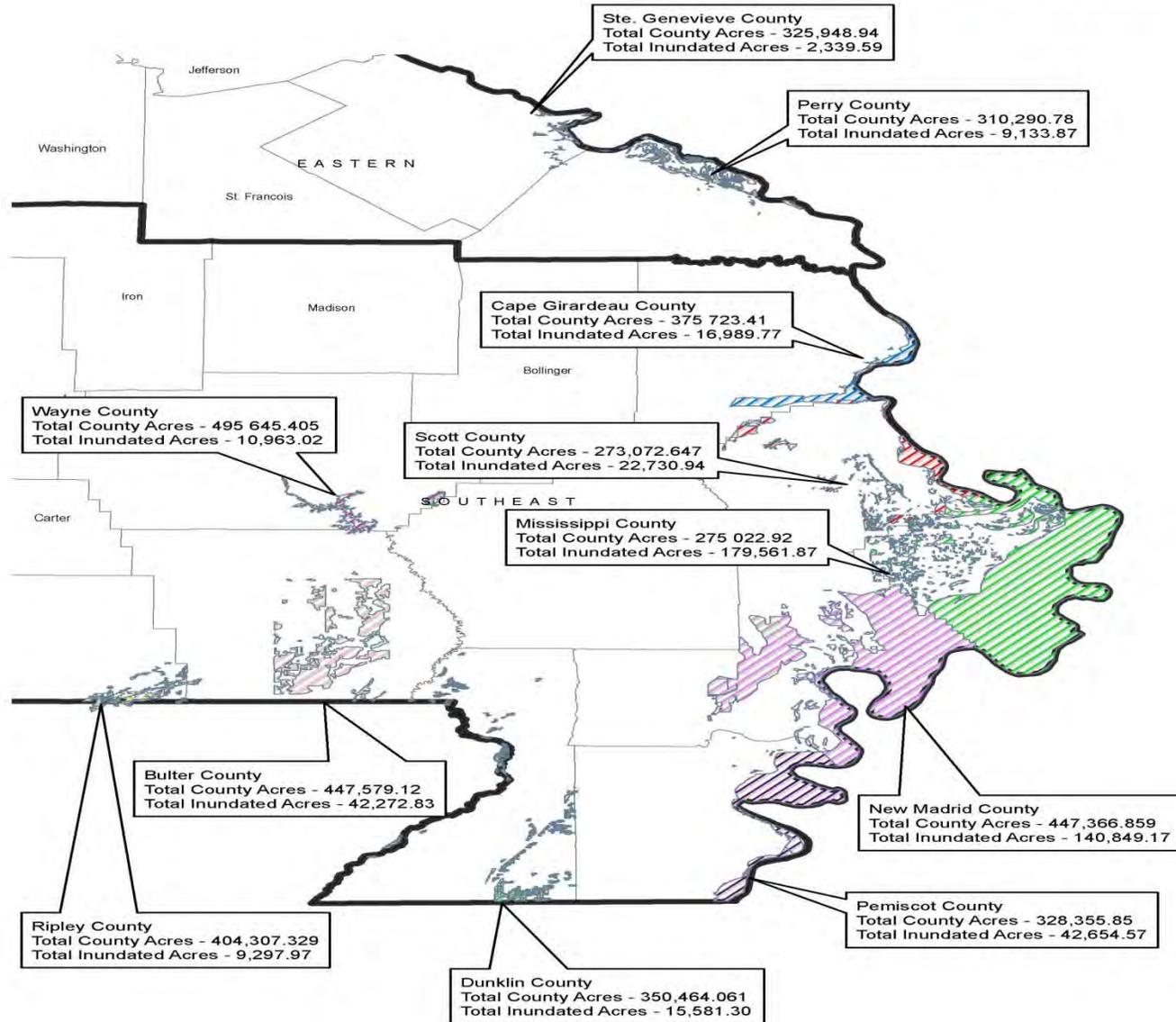
LandSat Collection Paths – Spring 2011, SE Missouri





MSDIS
Making
Missouri
Available
Digitally

Southeast Missouri Flood Inundated Areas





DNR ARCHER Imagery for flooding...





St John's Hospital, Joplin – Before...



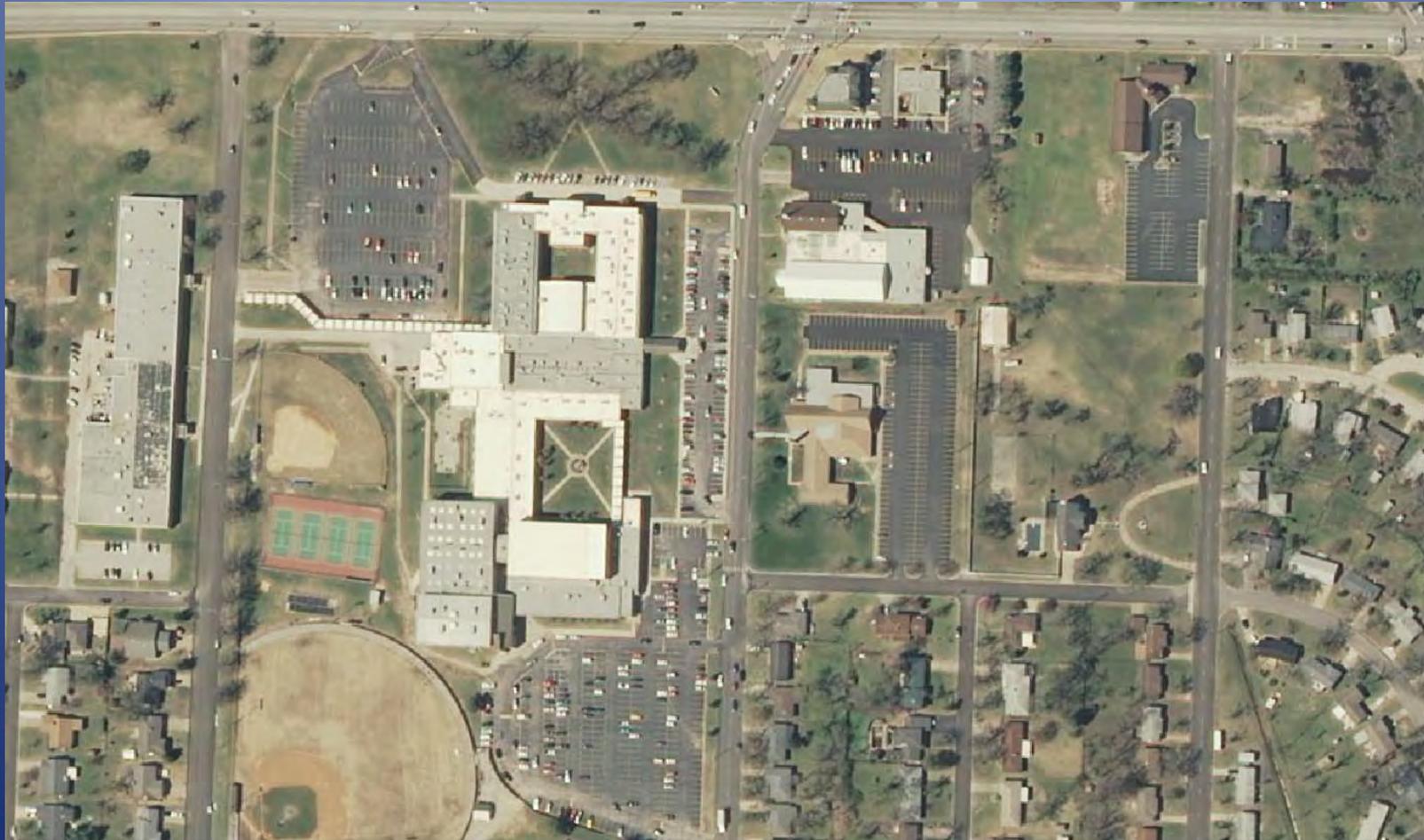


St John's Hospital, Joplin – After...





Large school, Joplin – Before...





Large school, Joplin – After...





MSDIS Role...

- Asked to develop imagery services for decision support...
- Asked for data sets...
- In some cases provided a link between imagery vendors and SEMA.
- In some cases provided a link (list servers & RSS) between state activities in support and geospatial community.



Positives...

- Motivated participation...
- Vendor community very helpful and easy to work with...
- Learned more than we would have in a year in just a few weeks...
- Skills will bleed over into other projects...
- USGS/FGDC/Missouri Structures project showed first documented payoff in a major event (Bird's Point Levy evacuation).



Issues...

- Coordination
- Communication
- Data inventory
- Feedback



Take away lessons...

- MSDIS role, which some called significant, was informal. That translates into we were not invited to the debriefings of any of the events.
- While some confusion is expected a number of tasks were done two and three times.
- Learning new imagery services on the fly has many things to recommend it...
- MSDIS needs to continue to work on the state's geospatial data inventory.
- While the outlook for geospatial disaster event support in Missouri has improved - it still has an uphill climb ahead...

Demonstration...

