

# THE LONE STAR

A URISA Texas Publication

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## S.1253 – Geospatial Data Act of 2017

As of May 25th, 2017, Bill S.1253 - Geospatial Data Act of 2017 has been introduced in the US Senate. A few weeks ago URISA International sent out a special bulletin regarding this bill and the potential consequences it could have on the geospatial industry. If you have not already taken the time to look into the Bill, we humbly ask that you do so. URISA's official response to the Bill can be found [here](#). The Bill itself can be found on [Congress.gov](#). There are many discussion already going on regarding the language found in the document. While this Bill has the potential to benefit the geospatial community, the current wording is alarming. More information and discussions can be found on [GIS Lounge](#) as well as the [ESRI forums](#).

## 8 Critical Skills You Need to be a Successful GIS Professional

By: Chris Akin

You've gone to school, taken some GIS training classes, logged countless hours creating shiny new maps, and maybe even been promoted or changed jobs a time or two. I'm right there with you. That's been my path as well. And over the last 14 years of being involved in the GIS industry, I've come to realize that there are certain skills that can really make you successful in your GIS career.

So I present to you the top 8 skills you need to be a successful GIS professional in today's world.

### 8. Basic Programming Knowledge

Every GIS professional learns to use one basic software package or another along the way. Some are very powerful and have some amazing capabilities. But even with that, you may still find yourself in need of automating a process,

performing complex analysis, or simply standardizing work spread across multiple departments or people. This is when some **basic programming skills come in handy**. I'm not advocating one language over another, but learning some fundamental **.Net and Python** code will allow you to tackle most of your basic scripting challenges. And once you're



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looking to write the best new web application on the market, you can hire a dedicated programmer or contract out to the numerous GIS consulting companies out there.

The best way to learn? That's easy – **just do it!** Learn some of the basics of that language (how to define a variable, running For loops, using If statements, etc.), and then just hop right in there and start typing away. **Start small and work on simple tasks**, such as updating your data. Depending on your needs and scheduled tasks, this could be very useful routine to automate!

## 7. Involvement in Professional Organizations

**Professional organizations bring together people of similar careers, backgrounds, objectives, and professional challenges.** These venues allow you to ask for help, contribute back to your industry, and stay abreast of new geospatial data and offerings.

I guarantee you that **there is an organization out there that's right for you.** Here are just a few right off the top of my head. Are you...

- Looking for a great **professional GIS organization**? Check out [URISA](#).
- A fresh **face right out of college** looking to make your mark on the world? Check out the [URISA Vanguard Cabinet](#)
- A hard-core **programmer** who spins out more code in a day than I have ever done in my life? I'm sure you know of [GitHub](#)
- An **open source** devotee? [FOSS4G](#) has it all for the geospatial world.
- Operating and maintaining **oil, gas, and utility infrastructure**? [GITA](#) can help.
- **Managing projects** for clients and stakeholders? [PMI](#) for standards and best practices.

That doesn't even include software-specific support or all the local and regional groups out there! Heck, hit the "ye ole Google" or start checking out all the great LinkedIn Groups!

## 6. A Great Network

*"It's not what you know, but who you know."* Learn to develop and appreciate your network. There are plenty of people out there with more experience than you and faced similar challenges along the way that would be willing to point you in the right direction. Or maybe you'll find others in the same boat facing the same issues. You'll be able to commiserate over your agony and potentially help each other out. **Remember, two oars get your boat moving forward; one oar keeps you going in circles.**

**Work on growing your network, fostering and contributing to it, and most importantly keeping it alive.** It takes work, but it's worth it!

As an added benefit, **your network is where your next job will come from.** Your network will know of job openings long before they get posted. Maybe you'll be recruited directly, but the benefits might be a bit more indirect. Your industry involvement will not only round out your knowledge and skills (and look great on your resume!), but **your network will be the ones you reach out to when you are looking to move on.** They'll be your best advocates and sounding boards. And if you haven't made the connection, your network grows tremendously when you're involved in all those professional organizations I already mentioned!

## 5. Keep Learning

**Go outside your comfort zone occasionally.** Those new complex tools and widgets you see today might be simplified and ubiquitous in a year or two. Getting exposure to those new offerings today helps you stay current and allows you to better adapt to industry changes as they happen tomorrow. Webinars are often free. Conferences come in all shapes and sizes, from the 10,000+ person Esri User Conference to the 20-30 person local sessions. Take a training session to learn how to code. Attend lightning talks to check out all those cool projects your fellow map geeks are involved in. **All those professional organizations are trying to make things**



**better for you. Take them up on their offerings!**

You may have to budget a year in advance, and sometimes beg and plead. But don't stop pushing for more training. **It's your career and your skillset to manage. It's in your hands to push to make you better.** You might have to take a vacation day and spend \$40 to attend a session, but that could pay major dividends down the road.

## 4. Software-Specific Knowledge

You might be thinking *"Wow, I would have thought knowing how to use GIS software would have been #1 on the list!"*

**Yes, you need to know how to use the GIS software** – that's where most of the work is done. But while knowing how to use the GIS software you have on hand is important, I believe **you need to know more than just how to push buttons** on one particular software. Esri has a great suite of offerings and has done a great job getting itself into school systems and GIS 101 classes. It's the 800 pound gorilla that most people know. But there are so many options out there for other GIS software applications. Open source software has really taken off over the last decade and there are plenty of other commercial desktop options. **Branch out, try other software.** Not only do you expand your knowledge base, but you might just like something else better! I believe that knowing how to use a specific software is much less important than other vital skills, which leads me to the next key to being successful GIS professional...

## 3. Analytical and Critical Thinking

As a GIS professional, you will be faced with a wide variety of mapping requests and analytical issues. One day you'll be working on right-of-way management for city streets, modelling storm surge the next day, and later combining datasets from multiple sources into one centralized catalog. **Can you look at the problem and think logically on how what needs to get done and how to do it?** Some of that know-how comes with time and experience, but there's something to be said for

sitting down and charting out the steps you'll need to address, the challenges along the way, and the approach you're going to take. I often sit down in front of a whiteboard and just start writing. Talk it out with a colleague and think about the challenges along the way. Your mind has to be able to think about every possible scenario in each step in the process. As you get involved in bigger projects, the workloads get more complicated and that **critical thinking earlier in the planning process really starts to pay dividends.**

## 2. Project Management

The best part of what we do is the ability to be **involved in so many different types of projects.** And more often than not, many of those projects are **happening at the same time.** You will continually be juggling projects, managing stakeholder expectations, and working against various time constraints. You must continually ask yourself several important questions, including:

- *How long will this project take?*
- *What is important or risky about this particular step in the process?*
- *Do I need to pull in additional resources?*
- *Who are the key stakeholders...and which ones are most critical to keep happy?*
- *What are the deadlines for each project?*
- *Can the work be rearranged to make it all fit?*
- *Do I need to run something up the chain to get management support?*

And above all, **communication and coordination are critical to the success of any project.** Keep your stakeholders informed and up to date, meet your deadlines, and always deliver better than promised. *And the Number 1 skill needed to be a successful GIS professional...*

## 1. Sales Skills

I firmly believe that **half of a GIS professional's job is sales.** You have a client request a small project, but maybe you believe there's more to that request than originally



thought. Maybe *they* don't even know what they want. Maybe they don't even know what is possible. (I'm no longer surprised when I hear a client say "You mean you can change the point's color based on their values?? WOAH!!") Perhaps what they really need is completely different than what they're asking for – maybe more complex, maybe much smaller.

**Your job is to talk to them and get to the root of their needs.** Heck, pick up the phone and call them. I know talking on the phone is a lost art, but give it a try – it's quite successful! Walk them through their options. Show them what you've done previously. Guide them towards solutions that may be a better fit. I often ask my clients to close their eyes and tell me what they ultimately would love to see. Rarely am I unable to fulfill their wish list.

## Taking the GISP exam

By: Olesya Powers

In 2015 the GISCI introduced an exam component into their GISP certification. While gathering the requirements for my GISP, I was not exactly thrilled about adding "studying for an exam" to my list of things to do. However, the exam component adds another layer of validity to a certification that is still relatively new, and if an effort is placed into something like this, then you certainly want it to be worthwhile.

This past summer, I took the GISCI Geospatial Core Technical Knowledge Exam (GCTKE).

The exam content is clearly displayed on the GISCI exam page, and for the most part it seems straightforward. That is until you start to study for it. One of the first things I noticed were the number of "national standards" one is required to know. As a Canadian, many of these "standards" were completely new to me as Canada does not use American Federal standards, nor do Canadian institutions teach and/or mention them in their curriculum. As the certification is designed to be internationally recognized, I found it to be interesting. Another thing that was very apparent was the amount of Information Technology-related content. While the nature of GIS is evolving rapidly to meet the needs of our fast-paced industry, having such high-level components in an exam aimed at someone with

four years of industry experience was also *baffling*.

The lack of a standard study guide and practice exam is unfortunate. GIS is an incredibly broad industry, touching an endless number of other industries. Even with exam content displayed on the GISCI web page, it was very difficult to gauge how many study hours to invest into each topic. Obviously, everyone has their own strengths and how much one studies will vary from person to person, however for a test of this nature, a little more guidance would have been extremely useful. Especially considering the *length* of the exam for a certification that is not currently mandated by any government.

In my own experience I found there were subjects that I put considerable effort into studying, to find that they were represented by a single question on the exam. On the other hand there were topics which I did not spend much time on, that were heavily represented, particularly relating to IT. One of the tools I used to help me gauge what the exam would be like were the "practice" questions listed on the GISCI website. Unfortunately these sample questions are not at all representative of the type of questions found on the GISCI GCTKE. The exam has robust questions requiring a deep understanding of the subject material. Any professional with a geography background will



likely have no problem with the geomatic topics, however if you're learning GIS Systems Architecture and Database Administration for the first time, I would suggest spending a lot of time in those areas.

For those taking the exam in the future, I would suggest going through the rubric and identifying the areas that you are knowledgeable and those you are not. Also take notice of the percentage of each category, because this really tells you how the questions will be weighed in the exam. A great resource to look at before you start is the [GISP Knowledge](#) document that was put together by a previous test taker. When I discovered this reference I was pleased to see that they had used many of the same sources I myself used to prepare. In addition to those resources mentioned in the document, I also had Safari Books Online and

Pluralsight available to me, this I consider an invaluable supplement to school books and class notes.

Despite the uncertainty I felt while preparing for the exam, I do believe the decision to include an exam component was a step in the right direction for the GISP certification. I would highly encourage the GISCI to consider the creation of a study guide and practice exam, due to the broad nature of the industry and the level of IT knowledge required for someone who is "early" in their career. The exam is still going through rigorous pilot testing and will likely change significantly between each sitting for the next few years. My hope is that the GISCI will find a way to adequately test our technical knowledge without offering an exam that is so excessive that many don't even attempt it.

## Spatial Appetites

By: Jordan Carmona, City of McKinney

Perhaps one of the most important advances of the 19<sup>th</sup> century was the advent of refrigeration; allowing the year-round production of lager beer and meat-packing. While the former is experiencing a bit of a renaissance through the rise of craft breweries, the latter has impacted the lives, laws, and health of millions of Americans for more than one hundred years. In 1905, Upton Sinclair published *The Jungle*, a novel that describes a fictionalized slaughterhouse/meat-packing plant in Chicago detailing the appalling working conditions and unsanitary practices that were common during that time period. For Sinclair, the saliency lay in the abuses of workers' rights; but the average reader's concern was more basic-- --horror to discover their food was routinely adulterated with sawdust, human and animal matter. Responding to the mass outrage in the following year, the United States Congress passed two laws that would lay the legal

groundwork for the modern regime of food safety inspections.

Today, the inspection of food establishments is routine; Texas has codified what should be inspected, how frequently, and what constitutes an infraction of the health code. Less routine; the public's access to both the overall results and the detailed violations. The short version, a restaurant is "scored" according to how many infractions an inspector finds-- --if more than 30 points are deducted then an establishment must re-test within 10 days (it can also be closed). The longer version is, infractions carry different weights; up to 3 points for critical violations, and no, having animal matter in your facility does not incur instant closure. While many cities throughout Texas do provide online access to a table containing a food establishment's name, address, and "raw" score, it lacks context. What infractions were found? Was this an outlier inspection? Does this establishment usually score well, or poorly?



Texas Law (25 Texas Admin. Code §228.253 (2015)) classifies this inspection report as a public document to be made available for disclosure to a person who requests it.

The basic nature of a GIS Professional should be that of a problem-solver; Broke? Fix it. Missing? Find it, and etc. Perhaps, the true artistry of our profession is presenting these solutions in a way that is visually pleasing and easy to “digest”. From my perspective, the web mapping application seemed simple enough—show our citizenry data that we already collect. After working with Adobe Flex (now deprecated) web map applications for the last few years, I was looking forward to seeing how robust ESRI’s online Web AppBuilder (ArcGIS API for JavaScript, not deprecated) had become. The most difficult part of this project had to do with the logistics of fully fleshing out a large data set.

If the main problem with presenting food safety inspection information is context, how do we provide it effectively? Our chosen format has to be able to answer the specifics of the infraction, and the frequency of when infractions occur. My opinion was that we could preempt requests for disclosure of the inspection reports by making them freely available via the web application; this saves staff time spent on answering freedom of information requests and more closely follows the tenets of transparency in government. Next, we considered what an inspection report actually represents: a single moment of time within the average business day when an inspector visits an establishment. The results of the inspection are dependent on many factors, and ultimately, judging a food establishment for months at a time based off the events of a single half hour does not provide adequate context. A more temporally-holistic approach would be to consider multiple inspections. Satisfying these two conditions was straightforward; implementing this across the dataset was tedious.

Attaching documents to a feature layer is relatively simple, using a standard or advanced license, run the “Enable Attachments” geoprocessing tool. Congratulations! You can now attach all sorts of files to the dataset that

you selected. Pretty neat huh? For space considerations, I would recommend using PDF format (on average, it uses 300kb for two sheets) instead of image files. Our Health Inspectors were already scanning their paper inspection reports so there was no change in their workflow to help support the new dataset. Viewing attachments through your web map application is only a matter of checking a box: show feature attachments as links. This box resides just below the link: Configure Attributes; which is found in the Configure Pop-Up menu available in the web map (different from the web map application, it has the map viewer interface).

After the modifications to the data schema and the pop-up menu were out of the way, I had the ability to attach PDF documents to the feature layer itself and view them by clicking a link in the feature layer’s pop-up window. Another significant issue stemmed from the size of the data set that I created. Our City currently has 588 permitted, permanent food establishments; additionally, our current City Limit stands at approximately 68 square miles, with a build-out potential a little over 115 square miles. This dataset will grow. Each establishment is inspected 4 times a year, so this translates to roughly 2400 records that need to be updated this year. Let’s say on average it takes one minute to update the individual fields and attach the new inspection report-- --you’re looking at 40 hours of work for this single data set for the entire year! Bump it up to two minutes a record and you’re at 80 hours, or two working weeks!

Getting around issues like data creep is one of the more striking challenges facing GIS professionals. There are three ways to approach it: automate, delegate, or hire more. Throwing man-hours at a problem is a solution, but generally not the most cost-effective. As a City, we are moving towards new software that will effectively digitize our records/permits from the point of submission in a SQL database; this will allow us to implement automation to remove the vast majority of maintenance hours for this dataset. The stumbling block here would be the financial cost of these new “city software”



packages, along with the knowledge prerequisites in both SQL and Python.

Delegation of duties to other members in your organization, and organizing workflows, can reduce GIS work-hours. While everyone may not be comfortable spinning up ArcGIS Desktop, most office workers can use Microsoft Excel (.xls) just fine; exporting a copy of the dataset as an excel file will allow other members of your organization to update the data. This removes time spent on editing individual fields by replacing that task with an Excel sheet (edited by others); join and then perform a field calculate. The last portion of the workflow is manually attaching documents. Name all scanned documents to include a unique key at some position within the filename (Ex. LocalCoffeeShop\_3512.pdf or key6128\_LocalTacoShoppe.pdf). With a unique key in place inside the filename, you have the ability to run the geoprocessing tool (using a standard or advanced license) *Generate Attachment Match Table*. This tool selects a data set, points to a folder on your machine/network, looks for the key field, and generates a table that pairs the files with the match key. Once the Generate Attachment Match Table tool has finished running, you can then run the geoprocessing tool (again, using a standard or advanced license) *Add Attachments*. This tool will select a data set, a key field, and using the Match Table (previously generated) will attach your documents *en masse*. Delegation, appropriate workflows, and the right geoprocessing tools, can reduce your maintenance time from a literal working week to the time it takes to run a join, field calculator, and two geoprocessing tools.

As an aside for the unique key: it may seem like a time saver to use the ObjectID or OID; it isn't. If you ever need to rebuild the layer then your OIDs will all change-- --this leaves you with a bunch of filenames that now have incorrect unique keys. The easiest way to create a simple sequential unique key is in Excel. Use the

aforementioned Excel export of your dataset, type out a few records in the series, highlight them all, and drag down; Excel has a nice counter function that will auto-fill the numbers in the sequence. Asset management systems like Cartegraph and Cityworks also have unique key requirements, so it may be helpful to future-proof your data that you might considering exploiting in another software system.

My personal journey was less... ..neat. The files were already named without unique keys, the files had identical names (for the same establishment over time) and were only separated by month, and there was a backlog of reports dating back to October 2016. The extra tedious workflow that I followed looked like this: grab copies of all the inspections reports per month-folder, open PDF to view the inspection score, update the field attribute for that establishment, rename the PDF, and attach renamed PDF manually. Lather, rinse, repeat. This was repeated, 1244 times; 30 work hours (I did not average one record a minute). An hour editing session separated by a week or two isn't that bad, but having a half-year's worth of those lumped together really puts cumulative inefficiencies into stark perspective.

While my work is by no means one of life or death, the historical realities of the early 20<sup>th</sup> century that produced our current system of food safety and inspections definitely stemmed from such stakes. Today's Texans are rightful recipients to the knowledge of what is in our food and in what conditions it is prepared. This web map application allows the citizens of our City and all those that dine within our borders to easily access that information.

<http://mck.maps.arcgis.com/apps/webappviewer/index.html?id=c66381219b01403b8eb34d63e3231102>

<https://www.mckinneytexas.org/221/Restaurant-Scores>



# Anticipating flood impacts anywhere in Texas – The Texas Flood Response Project

By: Tina Hansen

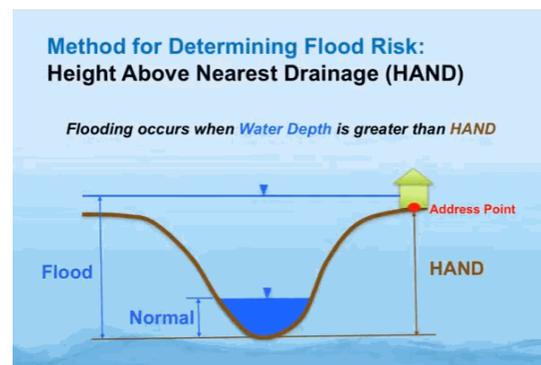
URISA Texas' May 2017 Virtual Speaker Series webinar featured a presentation by Dr. David K. Arctur, on the topic “**Developing Near-Real-Time Flood Impact Mapping in Texas.**” Dr. Arctur is a Research Scientist in the Center for Water and Environment, and Research Fellow in the Center for Integrated Earth System Science at the University of Texas at Austin.

After heavy rains caused record flooding in Central Texas in May of 2015, FEMA flood response funding was made available through the Texas Division of Emergency Management (TDEM) of the Department of Public Safety. With this funding, Dr. Arctur and partners at the local, county, state and federal levels initiated a flood planning project. Their study aimed to develop prototype mapping tools for flood planning at state and local levels.

The team was able to keep development costs down by drawing on the National Water Model and NHD+ data. This gave them detailed engineering modeling data available 24/7/365 for Texas rivers and creeks. They also assembled a set of state-wide address points which would be the basis for their risk mapping. Using the elevation model ‘Height Above Nearest Drainage’ or HAND method, the team assigned a value to each address point, representing its flood risk.

Using this risk data, the team has developed map templates that Public Safety folks can use. With their tools, Fire Departments and Emergency Management personnel can build maps to aid in flood risk management and incident response. The maps can help to identify areas at risk, evacuation routes, and emergency staging areas. (Dr. Arctur makes it clear their products aim to meet the needs of Public Safety and are not for insurance use.)

The project is ongoing as work continues to improve the mapping tools: For example, the process of integrity checking has shown the HAND-based data is fairly accurate in hill country but not so accurate in coastal regions: LiDAR readings can be too flat in coastal areas resulting in HAND values of zero, so increasing points per sq ft is a major objective.



For now, the team's work provides rapid approximate flood risk mapping for Public Safety flood planning. Looking for more details on using the mapping tools? The fall issue of “*The Lone Star*” will include an article that explores in detail how Public Safety personnel can apply the team's mapping tools.

You can view the video of Dr. Arctur's May Speaker Series presentation on [YouTube](#).



# Upcoming Conferences and Workshops

## Conferences

### URISA Leadership Academy

Providence, RI – July 24-28, 2017

For more information visit:

<http://www.urisa.org/education-events/urisa-leadership-academy/>

### FOSS4G 2017 – International Conference for Free and Open Source Software for Geospatial

Boston, MA - August 14-19, 2017

For more information visit: <http://2017.foss4g.org/>

### GIS in Transit Conference

Washington, DC – September 6-8, 2017

For more information visit:

<https://transitgis2017.sched.com/>

### GEOINT and Open Source Analytics Summit

Alexandria, VA – September 19-20, 2017

For more information visit:

<http://geoint.dsigroup.org/>

### GITA/PODS Pipeline Week 2017

Houston, TX – October 3-5, 2017

For more information visit:

<http://www.pipelineweek.com/index.html>

### Esri Health and Human Service GIS Conference

Redlands, CA – October 17-19, 2017

For more information visit:

<http://www.esri.com/events/health>

### GIS-PRO, Annual URISA Conference

Jacksonville, FL - October 23-26, 2017

For more information visit:

<http://www.urisa.org/education-events/gis-pro-2017/>

### TNRIS - Texas GIS Forum

Austin, TX – October 23-27, 2017

For more information visit: <https://tnris.org/texas-gis-forum/2017/>

### SWAAG Conference - Southwest Division of the American Association of Geographers

Huntsville, TX, October 25-28, 2017

For more information visit: <http://www.sw-aag.org/2017-meeting.html>

### GIS/CAMA Technologies Conference

Houston, TX, March 19-22, 2018

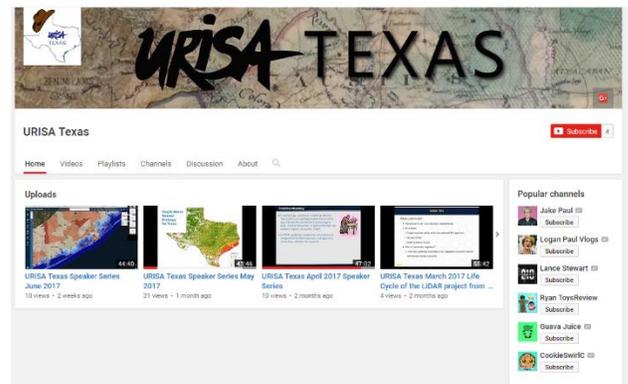
For more information visit:

<http://www.urisa.org/gis-cama-technologies-conference/>

## Introducing the URISA Texas YouTube Channel

URISA Texas is pleased to introduce our very own [YouTube Channel](#). Currently you can find the recordings of our Monthly Speaker Series posted here, and we'll be adding more content in the months to come.

Please be sure to check it out and subscribe!



# URISA Texas Events!

URISA Texas has had a blast so far this past year hosting our monthly Mappy Hours all over the state! Here are some of our favorite moments so far.



URISA Texas' June 2017 Mappy Hour in Fort Worth.



A montage of the Mappy Hour URSIA Texas hosted together with Texas A&M during the ESRI UC at the Altitude Sky Lounge in San Diego!

## MAPPY HOURS:

Our July Mappy Hour will be at Intrinsic Smokehouse and Brewery in Garland (just east of Dallas), on July 27<sup>th</sup>.

For the month of August, URISA will be hosting TWO Mappy Hours. The San Antonio Mappy Hour will be August 3<sup>rd</sup>, at Little Woodrow's, and the Corpus Christi Mappy Hour will be on August 31<sup>st</sup> at the Brewster Street Ice House.

We hope to see you all there!

## SPEAKER SERIES:

Also in July, URISA Texas is proud to present our next Speaker Series presentation: *2020 Census Local Update of Census Addresses (LUCA)*. This talk will feature important information about the upcoming census and what your organization needs to know. This will be presented on July 25<sup>th</sup>, by Meredith Gillum.

Keep an eye out for these upcoming events:

- More Mappy Hours
- Monthly Speaker Series

Visit our events [page](#) for more details



## Interesting Links

URISA Texas members come from a wide variety of backgrounds and experiences. Their paths often allow them to come across interesting material. We are pleased to share the following with you in hopes that it may be of help or interest to you.

The Atlas of ReUrbanism is the result of an initiative by the National Trust of Historic Preservation to build the successful, inclusive, and resilient cities of tomorrow. The Atlas is a tool for urban leaders and advocates better understanding and leveraging the opportunities that exist in American cities. It takes the massive amount of data currently available about cities and makes it more accessible, allowing for the exploration and discovery of connections between older buildings and economic, demographic, environmental measures. Check it out at:

<http://forum.savingplaces.org/act/pgl/atlas>

The North Texas Council of Governments (NTCOG) is once again offering an abundance of free GIS data for their 16-county region in the DFW area. These data include 2015 subdivision, development, and employer information. You can find these data and much more at <http://rdc.nctcog.org/Members/ServiceGroup.aspx?id=9>.

The National Pipeline Mapping System (NPMS) Public Viewer enables the user to view NPMS pipeline, liquefied natural gas (LNG) plant and breakout tank data one county at a time, including attributes and pipeline operator contact information. The user can also view gas transmission and hazardous liquid pipeline accidents and incidents going back to 2002 for the entire US. This is a data-viewer only – data cannot be downloaded.

<https://pvnpmns.phmsa.dot.gov/PublicViewer/>

Bridgehunter.com is a database of historic or notable bridges in the United States.

The purpose of this site is to assemble a database of the historic bridges in the Central United States. This includes everything from minor stone culverts to sweeping suspension bridges to massive steel truss spans. This also covers past, present, and future -- bridges that are long gone, those that are still standing, and those that might be built in the future using historic designs. <http://bridgehunter.com>

The Geologic Atlas of Texas (GAT) is a series of 38 hard copy map sheets depicting surface geology for the entire state of Texas at a scale of 1:250,000. In October 2002, the United States Geological Survey (USGS), in cooperation with the Texas Natural Resources Information System (TNRIS), embarked on a project to digitize all 38 GAT hardcopy map sheets and compile them into a single, stand-alone geodatabase. Completed in 2007, the project resulted in a rich, digital dataset containing more than 145,000 geologic features in Texas and portions of neighboring states. The Texas Geology Web Map Viewer allows you to explore all of the rich data at a touch of a button. You can find it here at

<https://txpub.usgs.gov/DSS/texasgeology/>.

[City Maps: A coloring book for adults](#) by Gretchen Peterson

[2016 ESRI Storytelling with Maps Contest winners](#)

[The Great British Coloring Map: A coloring journey around Britain](#) (in association with Britain's Ordnance Survey)

Podcast discussions on [geography & geospatial technologies](#)

USGS [Historical Topographic Map Explorer](#)



The [Living Atlas of the World](#)—available through ArcGIS Online—is the foremost

collection of geographic information used to support crucial decision-making.

## Thank you to our Sponsors!

URISA Texas would like to thank Dunaway Associates, Esri, and Western Data Systems for their generous donations.



Would you like an article, event or GIS related group included in the Lone Star? Contact us at [info@urisatexas.org](mailto:info@urisatexas.org).

