



## West Lakes Division of the American Association of Geographers 2018 Annual Meeting | November 1–3, 2018 University of Wisconsin-La Crosse | La Crosse, WI

Presenter	Poster Title	Abstract
<b>Beard, David; Heppen, John; Millett, Matthew</b>	Professional Wrestling Attendance and Electoral Geography in 2016.	<p>Wrestling has long had apocalyptic showdowns, where vengeance and justice are served to the satisfaction of wrestling's historically, mostly white, male, working-class audience. Donald Trump has a history of participation in World Wrestling Entertainment (WWE). Trump during his campaign for president derided his opponents with insults and lies. Trump employs wrestling rhetoric where feuds are settled after months or years of conflict. But did appeals crafted for that audience help him in 2016? In this poster we collected attendance data at WWE wrestling shows in the United States in 2015 and 2016 and voting data for the same markets. Statistical and spatial analysis revealed that positive associations between WWE attendance and Trump enthusiasm varied regionally. Smaller and Midwestern and Southern markets showed greater affinity between wrestling attendance and Trump performance. This suggests that in the Rustbelt and parts of the South his rhetoric and wrestling past served him well.</p>
<b>Blouin, Will; Betz, Johnathan; Anderson, Lucas; Kaldjian, Paul</b>	Suburban Agricultural Potential: Eau Claire, WI's East Side Hill Neighborhood	<p>Given the amount of lawn space in suburban neighborhoods, there is a significant opportunity for repurposing lawns into gardens that will result in positive environmental impacts, provide local food security, and have other beneficial consequences. Urban agricultural practices could potentially be carried out by individual householders, private businesses, and community organizations. This research measures the suburban agricultural potential of residential land in the East Side Hill Neighborhood of Eau Claire. Utilizing city land parcel data, Google Earth aerial imagery, and on-the-ground practices and measurements, potential garden area, yield, and environmental benefits are calculated.</p>

<p><b>Bohnet, Christina</b></p>	<p>Geographies of Brownfield Redevelopment in Michigan</p>	<p>This study offers a focused examination of two Michigan cities, Flint and Grand Rapids, through the lens of brownfields' vacant or underutilized former industrial/commercial properties with potential environmental contamination. This study analyzes the location of industrial land and successful brownfield redevelopment projects in both cities. These two cities were once very similar mid-sized industrial cities, with the nicknames "Vehicle City" and "Furniture City" respectively, but they are now very different. Though Flint is more financially strapped than Grand Rapids, Flint receives less brownfield redevelopment funding (from both EPA and DEQ sources) than would be expected, given its level of deindustrialization, while Grand Rapids receives the expected amount or more. We find that Flint's "big business city" status has rendered it less prosperous and less effective in completing brownfield redevelopment projects, while Grand Rapids, as a "small business city", has had far greater success in both arenas. Similarly, we find that economic considerations determine the viability of brownfield redevelopment projects as a method for urban revitalization: rising property values and a diverse local economy, such as Grand Rapids has, are needed to sustain brownfield redevelopment projects, and thus cities without these things, such as Flint, are not able to do so.</p>
<p><b>Christensen, Aaron M.; Carson, Eric C.</b></p>	<p>Mapping Interactions of Underlying Bedrock and Surficial Geology in the Driftless Area, Southwestern Wisconsin</p>	<p>The Driftless Area of southwest Wisconsin is characterized by long-term river incision into nearly flat-lying Paleozoic sedimentary rocks. This iconic topography is expressed at the surface because the region was never glaciated. It has come to symbolize the Driftless Area itself and affects natural resources, land use, and cultural history and identity. The Wisconsin Geological and Natural History Survey (WGNHS) is nearing completion of an 8-year project to map the surficial geology in five counties in the Driftless Area. Mapping has identified upland (primarily wind transported), hillslope (gravity transported), and valley bottom (river transported) deposits. The primary objective of the work presented here is understanding and mapping how bedrock geology impacts hillslope processes and deposits. The most significant such relationship is caused the contact between two specific geologic units: the Tunnel City Group and the overlying Trempealeau Group. This geologic contact corresponds to a change in topography, land use, and surficial map units. At the surface elevation corresponding to the contact, slopes transition from shallow below the contact to steep above, and land use changes from agriculture or pasture below the contact to forest above. This transition also corresponds to two distinct mappable surficial units. The contact described above, and the contact between the Trempealeau Group and the next higher geologic unit, were mapped in ArcGIS across ~6,000 km<sup>2</sup> during the summer of 2018. The results will feed into the finished map, which will improve management decisions such as locating new roads, identifying landslide hazards, and permitting development projects.</p>

<p><b>DeMuynck, Erin</b></p>	<p>Using Culturally Responsive, Place-based, and Dialogic Pedagogies to Teach Introduction to Cultural Geography</p>	<p>Cultural geographers seek to understand multiple ways places are understood and experienced, power relations involved in producing these differences, and possibilities for a more just production of space. Incongruously, introductory-level cultural geography courses are often taught in a top-down fashion. This study evaluates an approach to teaching that incorporates students' own cultural identities and places as course content and dialogue across cultural differences as pedagogic practice. Preliminary results suggest overlapping benefits. It can help make academic cultural geography accessible and relevant to introductory-level students; it can help build a sense of belonging and community; and it can encourage students to work together to produce knowledge by fostering more meaningful and empathetic group discussions. Notably, students became genuinely interested in their classmates' diverse experiences and perspectives, which many of them had previously not considered or had assumed to be equivalent to their own.</p>
<p><b>DeMuynck, Erin; McDaniel Eric</b></p>	<p>Public School Closures and Neighborhood Change: A Study of Four Sites Impacted by the 2013 Chicago Public School Closures</p>	<p>In 2013 forty-nine public schools were closed in Chicago. Our initial GIS analysis compares and contrasts demographic characteristics of the neighborhoods targeted for closures with neighborhoods that experienced few or no closures. Most notably, 52% of the closures were in neighborhoods with annual per capita income below \$16,000. We selected four of these neighborhoods to observe visually and to gather residents' perspectives on changes in their communities since 2013. Because schools serve as key spaces of community connection and support and as bridges to greater economic opportunity, we hypothesized that we would find evidence of economic decline. However, in three out of the four sites we identified as likely to have suffered economic decline, we found gentrification processes underway and concerns about displacement of long-time residents. Interviewees also noted incoming residents often send their children to selective-enrollment charter schools or to private schools while long-time residents have been less able to access those options and their children have had to travel long distances to attend schools that are not perceived as better than the schools that closed. Residents in only one of the four sites noted sustained decline in what they saw as positives aspects of their community as well as a striking increase in gang activity. Drawing on interview data and a review of gentrification literature, we place school closures in the context of broader gentrification processes occurring in Chicago neighborhoods and draw connections between the divergent paths of gentrification and disinvestment in the four neighborhoods studied.</p>

<p><b>French, Kenneth</b></p>	<p>Geography of Pitbull Lyrics</p>	<p>The purpose of this research was to understand the prevalence of geography in Pitbull's lyrics over time, especially in regards to the changing sense of place. Rappers often use geography in their songs as an authenticating tool--credibility of a rapper was based on what area they represented. Pitbull had referred to himself as Mr. 305 (area code of Miami) and more recently as Mr. Worldwide. This study involved analyzing 150 songs from all ten Pitbull albums for geographic references. Two researches read the lyrics or listened to all Pitbull songs and classified place names into two categories: Inside Florida and Outside of Florida. Researchers analyzed the lyrics together to account for various slang place references (e.g. The Dirty represents the South). The results were threefold: a) Pitbull was prolific with place references (4.63 place names per song), b) there was a decline in geographic lyrics over time, and c) outside of Florida references increased over time.</p>
<p><b>George, Sunita; Green, Raymond; Phoesri, Tatsaneewan</b></p>	<p>The Macomb Food Cooperative: An Exploration into an Alternative Food Network in the Rural Mid-West</p>	<p>The Macomb Food Cooperative (MFC) is owned by over 400 people that includes consumers, employees and producers, and offers a range of locally and regionally grown produce, organic and gluten free products and grains the Midwest and other parts of the country, as well as a range of fair trade commodities from around the world. The Co-op broadly promotes both "healthy" foods, and local/regional food regimes. The co-op offers people an alternative to the traditional supermarket foods both the quality of foods and the promotion of the local/regional economy. We examine this Alternative Food Network (AFN) in terms for its networks of producers, and map out the distribution in terms of categories commodities produced. Additionally we link the networks to the large literature on Alternative Food networks. Finally, we explore some of the challenges faced by the Co-op in Macomb.</p>
<p><b>Golosov, Nikolay; Petrov, Andrey N.; Pestereva, Anna; Kopashchikov, Leonid; Mikhailov, Vladimir</b></p>	<p>Re-analysis of Taimyr Wild Reindeer Herd Long-term Monitoring Data</p>	<p>The Taimyr wild reindeer herd is the largest and the longest monitored reindeer herd in Eurasia. The Extreme North Agricultural Research Institute in Norilsk, Russia carried out monitoring since 1969. However, monitoring data accumulated in the form of paper hard copies and the documentation was kept in Russian. The reports were not digitized and processed using modern geospatial technologies. Also, the only limited amount of the data was published, so these works remained inaccessible to most scientists. The goal of the project is to digitize the data contained in the reports, produce digital maps and derivative products, identify the herd migration patterns, disseminate the derived datasets and publish the analysis results. Now we nearly completed the digitization of the data contained in the reports and created digital derived products showing the spatial distribution of reindeer herds and their migration process. This poster presentation will present the initial results of the digitization and analysis of the distribution of herds based on aerial census reports.</p>

<p><b>Gray</b></p>	<p>Cinema and American Suburbs: John Hughes Depiction of the Chicagoland Suburban Landscape</p>	<p>The construction of the post-war American suburbs, specifically the Chicagoland suburbs, contributed to the "white flight" of middle-class families incentivized out of the city and into the now majority suburbs that encompass most of America's spatial distribution of land use today. The suburban identity is still evolving from its original construction, however has primarily remained middle to upper class and homogeneous in race. Through the lens of various cinematic works by writer, director, and Chicagoland native John Hughes, this presentation will explore the relationship between the representation of the Chicagoland suburban landscape focusing on the curated cultural paradigm of upper-class white, working families and the reinforcement of suburban stereotypes. Looking at film as a cultural text of 1980's American suburbia, I draw from John Hughes retrospective to examine themes such as racial representation, gender and sexuality dynamics, socioeconomic class, and the physical makeup of Chicago's suburbs.</p>
<p><b>Grin, Petr</b></p>	<p>Contention and Cooperation of the Arctic Basin Countries on the Example of the Oil Industry</p>	<p>The Arctic is a competitive zone for polar states and their extractive companies. However, harsh climatic conditions, the long-term nature and high cost of resource extraction move oil companies to cooperate. How international relations in the Arctic have evolved over the past century? How rivalry in the Arctic region has become an incentive for developing new technologies and inter-regional cooperation? The development strategies of oil projects in Arctic states were compared in this work. Large Arctic oil business projects, such as PL708 in Norway by Statoil (Norway) and Rosneft (Russia), were taken as examples to identify key mechanisms and forms of interaction between countries and their influence on the local development. The following aspects of the oil business in the Arctic were analyzed: international interactions in the Arctic dictated by considerations of rivalry and cooperation; history of international cooperation activity; opportunities and limitations of the oil and gas sector as a driver for the Arctic development; impact of oil market conditions on oil and gas projects implementation and the development of international cooperation in the Arctic region. The research revealed that politics and economy in the Arctic are closely interrelated. The process of the Arctic internationalization is driven by pragmatic goals and economic interests related to the extraction of natural resources and development of the transport and logistics systems. High political and financial risks of developing the oil and gas fields on the Arctic shelf are encouraging states and large companies to create production clusters and diversify their economic structure.</p>

<p><b>Haffner, Matthew; Comer, Johnathan C.</b></p>	<p>An Interactive Point Pattern Analysis Web Application and Teaching Exercise</p>	<p>Methods in spatial statistics are difficult for students to grasp, and student anxiety toward statistics is common. Studies have shown that gaming approaches, digital tools, and interactive instruction for teaching spatial thinking complement and enhance students' geospatial skills. In addition, these approaches can positively affect student perception of courses and thus improve classroom performance. Yet, few resources exist outside of textbooks for teaching these methods. This poster introduces a web-based, interactive point pattern analysis "game" that allows users to quickly and repeatedly generate a point pattern on screen and immediately learn whether the pattern is statistically different from random. It uses two point pattern analysis methods: quadrat analysis and nearest neighbor analysis. This game challenges students to achieve randomness, demonstrates the differences between quadrat analysis and nearest neighbor analysis, and easily permits in-class use by running in any web browser. It is built using Shiny, a web framework for R, and the application's code is hosted on GitLab where the authors encourage use, modification, and contributions by others.</p>
<p><b>Hogan, Anna; Koeller, Christine</b></p>	<p>Bathymetric Comparison of 1955 Survey to 2017 Survey: Beaver Lake, Waukesha County, Wisconsin</p>	<p>Hidden within the confines of winding roads and exquisite neighborhoods lies picturesque Beaver Lake. Located within Waukesha County near the City of Hartland and Village of Chenequa, it is a gem to its surrounding residents, recreationalists, and local anglers. In 2017, the Friends of Beaver Lake partnered with Cason &amp; Associates, LLC and the UW-Stevens Point Geographic Information Systems Center (GIS Center) to create a new bathymetric map with modern-day survey technologies. Using a Trimble R6® survey-grade GPS receiver, high-accuracy Ohmex Sonarmite® echosounder and field computer, data was collected to create an accurate bathymetric model of Beaver Lake using GIS technologies. The 2017 bathymetry model was spatially compared with a georeferenced and reconstructed 1955 bathymetry model from the last known survey to visualize depth variation between the two surveys. Results show an increase in the observed maximum depth from 46 feet in 1955 to 51.9 feet in 2017 and a 9.9 percent difference in calculated lake volume from 5138 acre-feet in 1955 to 5673 acre-feet in 2017. Depth variation between 1955 and 2017 is most likely due to the use of crude, less-accurate survey methods in 1955; however, sedimentation along with wind and shoreline scouring are also known to alter lake morphology (Fassbender 1992).</p>

<p><b>Khortseva, Natalia</b></p>	<p>Municipal Sustainable Development Programs in Murmansk, Russia</p>	<p>Urban sustainability in Arctic region has its unique features because of harsh climate and environment. Many Arctic cities run special municipal programs which are aimed to achieve sustainability. Some studies analyzed these programs and their contribution to sustainable development of Canadian and US cities. However, there is no study about municipal sustainable development programs in the Russian Arctic. The goal of this work is to study governmental policy towards sustainable development in major Russian arctic cities. There are two main objectives of the study: to review sustainable development programs in Murmansk and to compare them to Magadan. To achieve this goal, 14 municipal programs and 53 subprograms in Murmansk and 158 municipal programs in Magadan were studied. The study focused only on programs and subprograms, which were active in 2018. The results of the study reveal that sustainable development programs in Russian Arctic cities have many unique features which are not common in other countries. Municipal government in both cities do not use term 'sustainable development' and do not appear to refer to sustainable development goals. However, some of the reviewed programs may be considered as sustainable development programs implicitly. Programs are different in both cities, but may be classified according to sustainability goals, they aim to achieve. Unique features of the Russian municipal programs include "self-centered" programs, which focus on the development of municipal authorities and institutions, and "self-controlled" programs, where municipality controls its own activities.</p>
<p><b>Laingen, Christopher</b></p>	<p>The Geography of Oats in the U.S. and Canada</p>	<p>Oats were once an abundant crop on the U.S. agricultural landscape. Prior to the mid-1950s, in many counties across the U.S. Corn Belt, oats were the second most prevalent crop and were the fourth most harvested crop nationally behind corn, wheat, and hay. Oats were grown for many reasons: as a grain to feed horses and other livestock, as a crop for pasture and forage, as a rotational crop to break-up cycles of soil-borne insects and disease, and as a cereal grain for foods and beverages such as oatmeal, breads, and beer. However, as horses were replaced by tractors on farms, as more lucrative crops such as soybeans were developed, and as mixed-grain and livestock farming transformed into a more specialized cash-grain and industrialized livestock production system, oat acreage and production declined precipitously. From 1900 to 1960, U.S. farmers produced an average of 1.2 billion bushels of oats per year on around 42 million acres of cropland. During the most recent decade (2008 to 2018), oat production had declined to an average of 70 million bushels grown on 2.8 million acres of cropland - a ~94% loss in both production and acreage. This poster will show the geographic change in oat production over the past century and also discuss more recent changes in U.S. and Canadian oat production and disappearance.</p>

<b>Lewis, Michael</b>	College Readiness of Secondary Education Institutions in Northwest Wisconsin	This poster aims at identifying the differing advantages and disadvantages to small and large communities in Northwest Wisconsin in relation to secondary institutions and their associated college readiness. Through the use of data provided by the Wisconsin Department of Public Instruction and the University of Wisconsin, Eau Claire, the poster examines the different factors that influence college readiness including secondary institution rating, percent economically disadvantaged, and enrollment size. Our assumption was to find a relationship between community size and student success in their first year of college.
<b>Loft, Makenze; Ford, Trent; Arcuri, Angelina</b>	Quantitative Evaluation of U.S. Drought Monitor Drought Frequency and Severity	The U.S. Drought Monitor (USDM) is a weekly, map-based monitor of current drought conditions across the contiguous United States. The weekly maps are generated by a team of drought experts, informed by objective drought indices and meteorological/hydrological variables such as precipitation, soil moisture, and streamflow. Although the variables and drought indicators considered by the USDM authors are objective, the authors' interpretation of these indicators-- which ultimately informs the final weekly product--is mostly subjective. The USDM depicts weekly conditions in one of five categories, delineated to represent statistical percentiles or probability of the current conditions. Although the USDM is widely regarded as the benchmark for accurate, timely drought monitoring in the U.S., the frequency and severity of drought depicted by the USDM over its 18-year lifetime has never been quantitatively evaluated within the context of the probability or percentile categories on which the USDM is based. In this study, we compare the frequency of drought in each severity category depicted by the USDM between 2000 and 2017 to the expected frequency of drought of that particular severity at the climate division scale. Considerable variability exists in how often drought occurs across the U.S., with higher (lower) than expected drought frequency in the West and Southeast (Midwest and Northeast). Direct comparison with several, widely-used drought indicators suggests that the spatial and seasonal variability in USDM drought frequency is indicative of actual drought conditions over the 18 year study period.
<b>McMullin, Tom</b>	Diminishing Lake Tahoe Basin Water Quality	Water quality in the Lake Tahoe Basin has diminished as a result of deforestation and soil runoff. Lake Tahoe is the primary water source for a large number of communities in the Sierras; therefore, the study of deforestation's contributions to water quality is within the scope of the public's health interest. This poster considers whether deforestation has led to a decrease in overall water quality in Lake Tahoe. Elevated levels of sediment, nitrogen, and phosphorus in the lake water are the result of soil runoff in nearby deforested landscapes, which can lead to accelerated algal growth and potential bacterial growth that decreases the overall health of the ecosystem. A GIS change analysis was performed using a 25 year interval in order to identify the locations of deforested land. After identifying the deforested areas, and their proximity to tributary streams which carry the pollutants, I was able to assess where the pollution is originating. Then by comparing historical water quality analyses I was able to better understand the impacts that the increase in deforestation has had. Results seem to indicate that deforestation caused by human development as well as natural causes such as forest fire, are both contributing to decreased water quality.



<b>Miner, Katelyn</b>	The Effectiveness of Drip Tips on Leaf Surface Run-off	Leaf morphology is a critical component of plant physiology. One important aspect in wetter climates is a leaf's ability to shed water in order to prevent loss of nutrients on the leaf surface from standing water. This research examines leaf drip tip morphology for three types of drip tips from two different climatic zones in Costa Rica, La Selva Biological Station (the rainforest) and Palo Verde (the dry forest). I set out to determine how effective the different leaf morphologies were at shedding water and what the average volume of water run-off was, given a constant flow of water in a laboratory setting. Using multiple trials for each leaf type, I was able to generate an average volume of water run-off per minute for each drip tip morphology. From these experiments, the results showed a statistically significant difference, with long and narrow drip tips from the rainforest trees shedding a higher average volume of water than the dry forest trees.
<b>Molls, Maxwell</b>	Developing a Social Deprivation Index	A social deprivation index can be useful tool for urban and transportation planning. The poster will show the process of developing a social deprivation index by using GIS methods and the metropolitan area of La Crosse as the study area. Since the poster is part of an ongoing research project, it will emphasize the process of developing an index rather than displaying a finished product.
<b>Myers, Josie; Bergevin, Logan</b>	Perceptions of Walkability in the West Riverside Neighborhood, Eau Claire, Wisconsin	Residents who live in walkable neighborhoods are more likely to engage in higher levels of walking-related physical activity, report lower safety concerns, and experience higher levels of social engagement compared to those living in less walkable neighborhoods (Mason et al., 2013; Talen and Koschinsky, 2014). Although objective measures of the physical characteristics of walkable neighborhoods are important (e.g. street connectivity, walkable destinations, building density etc.), resident perceptions of neighborhood settings are equally important. Objective measures characterize physical design features of neighborhoods, but they cannot fully explain the feelings or experiences of residents. In collaboration with the Medical College of Wisconsin (MCW) and the Eau Claire City County Health Department (ECCCHD), we surveyed residents in the Eau Claire West Riverside neighborhood to examine resident perceptions of walkability and to identify socio-demographic correlates of walkability perceptions. This analysis provides insights about walkability from the perspective of residents to inform on-going efforts to develop healthy neighborhoods.

<p><b>Radenz, Jack</b></p>	<p>Testing the Potential of Unmanned Aerial System (UAS) Imagery and Object Based Image Analysis for Genus Level Mapping of Woody Vegetation in University of Wisconsin-La Crosse Campus</p>	<p>Canopy cover has essential role in helping regulate urban climate and quality of life in urban areas. Therefore, mapping and monitoring changes in urban canopy cover and detailed mapping of urban tree species is a prerequisite but have been methodologically challenging using space borne remote sensing images. We used RGB imagery acquired using UAS and validated genus level tree canopy field data to examine the potential of UAS imagery to map urban canopy cover across the UWL campus. The images were pre-processed using Structure from Motion (Sfm) resulting in an orthomosaic, which was analyzed using a hierarchical semi-automated OBIA technique. Ecologically representative objects were separated by green vegetation and non-vegetation at the first level, grass tree and shrub at the second level, and genus type at the third level. Suitability of different features available within OBIA (spectral, shape, and texture) were determined using feature space optimization. Results indicate that vegetation could be separated from non-vegetation with 98% overall accuracy. Increase in the level of mapping detail (for level 2 and 3) resulted in consistent decrease in overall mapping accuracy. Our results highlight the suitability and limitations of using UAS acquired RGB imagery for genus level mapping of vegetation within urban areas and highlights the need for future methodological developments required.</p>
<p><b>Scaramelli, Dan</b></p>	<p>Choosing your Constituency: A Study in Gerrymandering</p>	<p>In the United States, redistricting bodies can draw electoral districts to favor or disfavor candidates of a certain party. In an effort to address the partisanship of this system, some geographers have taken to assessing the compactness of electoral districts. Compactness, the geometric measure of a district's shape, is one of the tools used in these studies. According to the Loyola Law Institute, compactness can generally fit into three categories: contorted boundaries (smoother boundaries will be more compact), dispersion (less tendrils from the core is more compact), and housing patterns (tendrils in rural areas have a smaller effect on compactness than tendrils in urban areas). This study is an effort to bring the discrepancies in compactness of electoral districts to the public in a manner that is understandable using methods of geostatistical analysis. Preliminary analysis supports the supposition that electoral districts are drawn less for electoral fairness and compactness and more for partisan representation of parties in control of state legislatures at time of redistricting.</p>

<p><b>Schnoebelen, Lauren</b></p>	<p>Data Collection and Analysis of Local Water Supply Plans</p>	<p>Local Water Supply Plans (LWSPs) are an important component of the regional planning process of the Twin Cities metro area. Current and previous generations of LWSPs have been submitted in a format which is unsuitable for further analysis. Objectives of this project were to harvest data and information reported in paper and .pdf formats by municipal water suppliers, in their LWPS, and convert that data into a format suitable for quantitative and qualitative technical analysis. This helps local communities gain value from the data they are providing in each generation of LWSPs, while allowing the Metropolitan Council to gain a better understanding of regional water usage. Data and information were collected from the second and third generations of LWSPs and recorded in excel databases. The harvested data includes the historic water demand, large volume customers, projected water demand, and demand projection methodologies. These data were then analyzed to answer several questions focused on total per capita demand, reaching Master Water Supply Plan sustainability goals, changes in population served and to better understand large volume users in the Twin Cities. From this analysis, issues found in the local water supply plans were recorded and a list of recommendations was created to help guide formatting of future generation of LWSPs. The current and historical LWSP data also provides a reliable source of data to improve ground water modeling efforts, estimate future water demand, and identify potential partners for water conservation education programs like the Minnesota Technical Assistance Program for Industrial Water Customers.</p>
<p><b>Silber, Chris</b></p>	<p>Developing Empty Spaces: A Study on Historical Land Vacancy and Greenspace Development in Washington Park Chicago</p>	<p>Vacant green space covers nearly one-third of the Washington Park neighborhood on Chicago's south side. Understanding how this vacant land originated and how residents and non-residents are using and developing these areas is integral to planning for the community's future. This study maps land vacancy in Washington Park over the past 80 years and investigates how current vacant land is being developed in the community. Using historical aerial photography and manual interpretation, I mapped vacant land parcels in Washington Park at various points from the earliest aerial photographs in 1938 to 2018, tracking vacant land change in context to historical events in the neighborhood, such as the construction and eventual demolition of the Robert Taylor public housing project. I used land parcel ownership data, city of Chicago data, and ground data collection to explore the different ways residents, non-residents, and organizations are using and developing the land. The goal of the resulting analysis is a better understanding of the neighborhood's history of land clearance and development to establish an equitable and economically resilient neighborhood.</p>

<p><b>Turner, Summerlyn</b></p>		<p>As a woman of color who rides a motorcycle as a sole means of personal transportation, I face the reality that I am isolated and underrepresented in the motorcycling community, which typically consists of white men. Marketing strategies that adhere to widely accepted cultural norms about motorcycling are a main cause of this underrepresentation. Motorcycle advertisements directed towards men often create the perception that roadways and nature settings are male spaces, which influences the way that female motorcyclists need to navigate them. This project will discuss factors that create the idea that streets and nature are male spaces, as well as remark on the specific factors affecting the perception and attitudes toward women motorcyclists. Utilizing theories on fear, power, danger, sexualization, and influences of marketing on society, factors that cause the gendering of nature and roadways can be identified, leading to the proposal that motorcycling advertisements should become more inclusive and accommodate a larger demographic.</p>
<p><b>Whittaker, Rasa</b></p>	<p>DePaul's Urban Forest: An Interactive Map to Increase Environmental Literacy</p>	<p>This poster presentation will display an interactive tree map of DePaul's Lincoln Park Campus as part of the university's efforts to engage students with the urban forest and increase environmental literacy. Additionally, it will exhibit the value and potential of interactive maps for urban college campuses. As the existing knowledge of DePaul's trees is limited, creating an accessible database will allow for in-depth spatial analysis of the campus's urban forest and inform future decisions regarding tree maintenance, planting, and care. Using ArcGIS Online, the map draws from other universities' and municipalities' tree maps to enhance DePaul's information such as species common name, scientific name, diameter, and known health issues. The newly-formed DePaul Student Tree Committee (DSTC) may also use it to prioritize projects needed to obtain and maintain the Tree Campus USA certification.</p>
<p><b>Willette, Rasa</b></p>	<p>Geography's Narrative: How People Share Information</p>	<p>Technology is ever advancing, and alongside that geographic technologies are developing too. At the cross of these lie both collaboration and tension between programming and geographic technology in the digital humanities. ESRI's Story Map is indicative of this framework in its features that it's designed to be accessible and demonstrative. Its platform is intended to appeal to a wide base of people where knowledge of either GIS or web coding isn't necessary, and its use is directed to the presentation of information rather than the analysis of information. This shows the interdisciplinary value of the Story Map, and highlights the changing narrative of how people share information in the digital humanities. In the framework of Geography and technology, this course of narration ranges from tangible cartography, to ArcGIS, to interactive Story Maps.</p>