

Master of Public Health

Applied Practice Experience

by

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MASTER OF PUBLIC HEALTH

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List of Abbreviations

APE	Applied Practice Experience
CASPER	Community Assessment for Public Health Emergency Response
COPD	Chronic Obstructive Pulmonary Disease
DMP	Diagnostic Medicine/Pathobiology
EAG	Emergency Action Guide
EM	Emergency Management
EJI	Environmental Justice Index
EOP	Emergency Operations Plan
ESF	Emergency Support Functions
FHWC	Flint Hills Wellness Coalition
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
HIPAA	Health Insurance Portability and Accountability Act
ICS	Incident Command Systems
KSU	Kansas State University
KDHE	Kansas Department of Health and Environment
MPH	Master of Public Health
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
O ₃	Ozone
PHEP	Public Health Emergency Preparedness
PM	Particulate Matter
RCHD	Riley County Health Department

RSV	Respiratory Syncytial Virus
SVI	Social Vulnerability Index

Chapter 1 - Portfolio Products

The Kansas Department of Health and Environment (KDHE) is a state agency created to protect, improve, and monitor the health and environment in Kansas. The agency is comprised of three divisions with separate but overlapping responsibilities. The Division of Public Health uses assessment, policy development, and assurance to promote and protect public health in Kansas. The Division of Environment uses regulations and programs to protect the Kansas environment. Lastly, the Division of Health Care Finance works with health policy to improve health for all in Kansas. Each division is further separated into bureaus with more specific responsibilities that assist in meeting the agency's mission. The official mission is stated as follows: "The Kansas Department of Health and Environment works to protect and improve the health and environment of all Kansans" (1).

The Riley County Health Department (RCHD) is a county agency created to serve Riley County through the promotion and protection of the community in several aspects. RCHD works toward a mission "to promote and protect the health and safety of our community through evidence-based practices, prevention, and education" (2). This accredited health department is made up of several different departments, some of which include clinic services, community health and wellness, Raising Riley, and emergency preparedness (2). The county agency partners with many community organizations and facilities to meet the public health needs of Riley County.

The Public Health Emergency Preparedness (PHEP) department at RCHD is crucial to achieving the agency's mission. This department coordinates community response and preparation efforts for threats such as natural disasters and disease outbreaks. Another important responsibility of this department is community education concerning outbreaks, public health resources, and emergency procedures (3).

As both KDHE and RCHD share an overarching goal of promoting public health for all within their jurisdictions, a cross-sectoral collaboration between the agencies is common. My applied practice experience (APE) was conducted at both agencies to develop knowledge of public health capacities at both the state and county levels. To achieve this goal, I served as a PHEP intern onsite at RCHD and conducted virtual work with KDHE involving data analysis.

Majority of my time at RCHD was spent working with the department's PHEP coordinator, Ms. Skylar German. During this time, I was exposed to several different trainings, meetings, and volunteer opportunities that allowed for the further development of my understanding of county-level government practices and community engagement. As I assumed

the position of PHEP intern at RCHD, the department was partaking in organizational efforts following the surge of the COVID-19 pandemic, and preparatory efforts prior to flu season. In line with the needs of the agency at this point, and under the direction of Skylar, I created Community Assessment for Public Health Emergency (CASPER) surveys for use prior to or following an emergency event. The initially created survey was designed for use to assess current PHEP in Riley County. I then created two additional surveys to be used to assess public health response needs following disastrous events such as a tornado or floods. Secondly, the agency needed an updated emergency preparedness guide for distribution throughout the community. Following the exploration of the most common emergency situations in Riley County, I created a new emergency preparedness guide for community educational purposes.

Using knowledge gained from RCHD regarding public health needs in Kansas, I worked with KDHE to focus on social vulnerability, extreme heat, and respiratory illness data. Under the guidance of my preceptor, Dr. Steven Corbett, I was able to create and analyze maps created using ArcGIS Pro (3.0) software. Using these maps, I created a research poster for presentation at Kansas State University (KSU) poster sessions. In conclusion, throughout my two experiences, I produced four main products for my portfolio.

Table 1.1 Summary of Portfolio Products

Portfolio Product		Description
A	Riley County CASPER Surveys	A collection of three ready-to-use surveys including questions related to demographic information, situational needs, and communications. These surveys are intended for use in Riley County to assess emergency preparedness needs and emergency response needs following a flood or tornado.
B	Riley County Emergency Preparedness Guide	An educational guide outlining need-to-know information for all in Riley County regarding thunderstorms, flooding, tornadoes, extreme heat, winter weather, wildfires, and bioterrorism. The guide was created with graphics and kid-friendly

		designs to encourage education at all ages within family structures.
C	GIS Maps	Kansas maps depicting social vulnerability, extreme heat, chronic obstructive pulmonary disease (COPD) crude prevalence, and asthma crude prevalence by census tract were created.
D	Research Poster	A research poster that was presented during Phi Zeta Day and Grad Forum at KSU. The poster showed results from the analysis of the GIS maps.

Table 1.2 Portfolio Products and Competency Addressed

Portfolio Product		Number and Competency Addressed	
A	Riley County CASPER Surveys	9.	Design a population-based policy, program, project, or intervention.
B	Riley County Emergency Preparedness Guide	18.	Select communication strategies for different audiences and sectors.
C	GIS Maps	1.	Apply epidemiological methods to the breadth of settings and situations in public health practice.
		3.	Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming, and software, as appropriate.
		4.	Interpret results of data analysis for public health research, policy, or practice.
		6.	Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels.
		9.	Design a population-based policy, program, project, or intervention.
D	Research Poster	4.	Interpret results of data analysis for public health research, policy, or practice.
		6.	Discuss the means by which structural bias, social inequities and racism

			undermine health and create challenges to achieving health equity at organizational, community and societal levels.
		18.	Select communication strategies for different audiences and sectors.
		19.	Communicate audience-appropriate public health content, both in writing and through oral presentation.

Timeline

Week 1 (10/17/2022-10/21/2022) – During week 1, I was onboarded as an intern at RCHD. I was introduced to employees, given a tour of the buildings, and given brief overviews of each department’s responsibilities. I also attended two meetings held by Debbie Nuss from the Flint Hills Wellness Coalition (FHWC) outlining planning and budget options for the distribution of head lice kits in schools around Manhattan, Kansas.

Week 2 (10/24/2022 -10/28/2022) – Week 2 consisted of completing several online Kansas trainings explaining public health in Kansas and HIPAA. These trainings included the following: Overview of the Kansas System, Governance and Policy, Financial Management and Preparedness, Workforce Development, HIPAA Awareness, HIPAA Allowable Disclosures and Safeguards, and HIPAA Right to Access and Documentation. During this week we also finished preparation for “Oktfluberfest” as the event took place at the end of the week. I participated in this community vaccine outreach event by educating community members on RCHD’s mobile testing lab.

Week 3 (10/31/2022 - 11/4/2022) – During week 3, I began research and preparation to complete CASPER surveys for RCHD. I completed the surveys during this time frame, and they were fully approved by the PHEP department. I also began and completed Federal Emergency Management Agency (FEMA) trainings to become more fully educated on the incident command system (ICS) and the national incident management system (NIMS). These trainings included the following: Introduction to the Incident Command System, Basic Incident Command System for Initial Response, National Response Framework, An Introduction, and An Introduction to the National Incident Management System. At this time, I also began receiving Social Vulnerability Index (SVI) data from Dr. Corbett.

Week 4 (11/7/2022 - 11/11/2022) – Week 4 at RCHD was spent meeting with Riley County Emergency Management (EM) to facilitate my understanding of and begin planning for the Emergency Support Function (ESF) 8 meeting. I learned about this yearly Medicare requirement for healthcare facilities across Riley County. At this point, I also received asthma and COPD data from Dr. Corbett and began training online GIS training through Esri.

Week 5 (11/14/2022 - 11/18/2022) – During week 5, I met with Debbie Nuss individually to learn the process by which she updates the FHWC website to be prepared to assist with future website editing. Secondly, I received departmental survey data from Ms. Shanika Rose to complete a qualitative analysis of needs across RCHD. Following the completion of the analysis, I also received and began sorting through Kansas heat data.

Week 6 (11/21/2022 - 11/23/2022) – For week 6, the PHEP department resumed previously halted epidemiology meetings. I took meeting minutes and learned of recent disease happenings in the county. I also completed data entry for RCHD's clinic family planning survey.

Week 7 (11/28/2022 - 12/3/2022) – RCHD PHEP hosted a table at Manhattan's "howl and prowl" event where I conducted short zoonotic disease surveys to community members giving them an opportunity to become more educated about their pets and earn a prize. During this week, I also reviewed and made necessary edits to RCHD's emergency operations plan (EOP) document.

Week 8 (12/5/2022 - 12/9/2022) – For week 8, I began assisting RCHD PHEP with COVID-19, influenza, and respiratory syncytial virus (RSV) testing. I also reviewed and edited RCHD's emergency action guide (EAG) documentation. Looking to further explore environmental justice in Kansas, I received environmental justice index (EJI) data and documentation for review from Dr. Corbett.

Week 9 (12/12/2022 - 12/16/2022) – During my final week with RCHD, the ESF 8 meeting was hosted. I assisted with the preparation for the meeting and took meeting minutes for sharing with all attendees. I also participated in fit testing where several county employees were fitted with appropriate masks in preparation for potential air quality threats. Between these tasks, I also assisted with virus testing as needed.

Weeks 10 -15 (1/2/2023 - 2/17/2023) – As my time with RCHD came to an end, I was able to focus more fully on GIS training. For weeks 10 through 15 of my APE, I completed several Esri trainings and further sorted the data I was provided. These training courses included the following: GIS Basics, ArcGIS Pro Fundamentals, Getting Started with ArcGIS Pro, Getting Started with Spatial Analysis and Fundamentals of Mapping and Visualization. Through these trainings, I was able to explore potential relationships between extreme heat, social vulnerability, and respiratory illness in Kansas. Following this, I mapped and analyzed multiple data sets to conclude the results for my reports.

Chapter 2 - Competencies

Table 2.1 Summary of MPH Foundational Competencies

Number and Competency		Description
1	Apply epidemiological methods to the breadth of settings and situations in public health practice.	GIS mapping was used to analyze and visualize Kansas population and heat data to look for potential relationships.
3	Analyze quantitative and qualitative data using biostatistics, informatics, and computer-based programming and software, as appropriate.	GIS software was used to conduct analyses based on data from a variety of sources. Census tract-level associations were identified and explored.
4	Interpret results of data analysis for public health research policy or practice.	Maps were created and the discovered results were interpreted to various audiences through research poster presentations. Results were applied to public health practice to inform professionals on the next steps.
6	Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels.	Interpreting health results in terms of high SVI allowed for the presentation and discussion of the potential health disparity issues in Kansas.
9	Design a population-based policy, program, project or intervention.	An emergency preparedness guide was created with an understanding of the needs of the community through county population data. Additionally, a spatial analysis of Kansas population data was conducted to assess public health needs.
18	Select communication strategies for different audiences and sectors.	A research poster and emergency preparedness guide were designed to be reader-friendly and conducive to learning regardless of background knowledge or education. I prioritized successful communication of knowledge in the creation of both resources.
19	Communicate audience-appropriate public health content, both in writing and through oral presentation.	My project results were presented with the intention of appealing to non-public health professionals to facilitate clarity and understanding.

Competency 1 – GIS mapping allowed for the achievement of this competency. Through the mapping with GIS software, I was able to visualize and analyze COPD, asthma, heat, and social vulnerability data. Through visualization, I found census tracts with high disease crude prevalence. I also spatially analyzed this data in parallel to extreme heat and social vulnerability

data to locate areas where of most concern for public health policy and resource distribution. In summary, the epidemiological methods of spatial analysis and disease mapping were applied to conclude the results of my data exploration.

Competency 3 – Using GIS computer-based software I was able to conduct spatial and statistical analyses to allow for a visual understanding of chronic respiratory illness, social vulnerability, and extreme heat in Kansas. I combined several sources of data, chose variables of focus, and used quantitative techniques to identify census tract-level associations.

Competency 4 – The maps created allowed me to identify patterns and interpret results to multiple audiences. These results were included in poster presentations to audiences from several different academic backgrounds. Visual representations, in this case, maps and a poster, allowed for results to be understood and applied for research, policy, or practice.

Competency 6 – As a major focus of my project was analyzing the SVI in Kansas, I was able to explain and depict associations between high SVI and high crude prevalence of COPD or asthma. Simultaneously, mapping previous century extreme heat rates and high SVI allowed for the identification of communities of focus for health equity interventions. Poster presentations provided the necessary platform to educate and discuss potential health disparities that can be inferred from the mapping.

Competency 9 – Creating a Riley County Emergency Preparedness Guide required that I understand the educational needs of Riley County in relation to this topic. Using county data, I identified topics and formatting preferences and created the booklet to benefit the community's knowledge and safety practices. Furthermore, conducting a spatial analysis of population data allowed me to assess the public health needs of census tracts in Kansas concerning extreme heat and chronic respiratory health resources. Including SVI in this analysis facilitated my understanding of potential factors associated with the high crude prevalence of respiratory illnesses.

Competency 18 – Recognizing the importance of communicating information successfully to a multitude of audiences, when creating a research poster and an emergency preparedness guide, it was important to include easy-to-understand information. Both products were created with the intention of being reader-friendly regardless of background knowledge.

Competency 19 – By presenting my project results in the form of a research poster I was able to design an appealing poster that could be easily understood by non-public health professionals. This was done using mindful vocabulary and descriptions of methodology and results. Preparing an oral presentation component allowed me to expand on my poster content as well as clarify points to my audience to convey the main points.

Table 2.2 MPH Foundational Competencies Course Mapping

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
Public Health and Health Care Systems					
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings		x			
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels					x
Planning and Management to Promote Health					
7. Assess population needs, assets and capacities that affect communities' health		x		x	
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs					x
9. Design a population-based policy, program, project or intervention			x		
10. Explain basic principles and tools of budget and resource management		x	x		
11. Select methods to evaluate public health programs	x	x	x		
Policy in Public Health					
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence		x	x	x	
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes		x		x	x
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations		x			x
15. Evaluate policies for their impact on public health and health equity		x		x	
Leadership					
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making		x			x
17. Apply negotiation and mediation skills to address organizational or community challenges		x			
Communication					
18. Select communication strategies for different audiences and sectors	DMP 815, FNDH 880 or KIN 796				
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	DMP 815, FNDH 880 or KIN 796				

22 Public Health Foundational Competencies Course Mapping	MPH 701	MPH 720	MPH 754	MPH 802	MPH 818
20. Describe the importance of cultural competence in communicating public health content		x			x
Interprofessional Practice					
21. Perform effectively on interprofessional teams		x			x
Systems Thinking					
22. Apply systems thinking tools to a public health issue			x	x	
Evidence-based Approaches to Public Health					
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	x		x		
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	x	x	x		
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	x	x	x		
4. Interpret results of data analysis for public health research, policy or practice	x		x		

Table 2.3 Application of Systems Thinking Tools to a Public Health Issue

Use of Systems Thinking Tools	
Systems Thinking Tool	Description of Use
Innovation (or change management) History	I used components of the Innovation History systems thinking tool to analyze respiratory health, SVI, and extreme heat data to help set priority initiatives for public health professionals in Kansas. I initially planned my APE with a seemingly broad goal of exploring extreme weather and the impacts that may have on health in Kansas. As I began interning for RCHD and KDHE I was able to explore the common goals of both agencies through stakeholder discussions and identify ways to produce a project of interest to the populations served by both. I explored public health response history and capabilities of both agencies to inspire a narrower approach to my spatial analysis. My spatial analysis is an initial step in developing a plan to lower rates of respiratory illness in Kansas and lower the negative impacts of extreme heat.

References

1. *About KDHE / KDHE, KS.* (n.d.). Retrieved March 2, 2023, from <https://www.kdhe.ks.gov/1548/About-KDHE>.
2. *About Us—Riley County Health Department / Riley County Official Website.* (n.d.). Retrieved March 2, 2023, from <https://www.rileycountyks.gov/2010/About-Us---Riley-County-Health-Department>.
3. *Public Health Emergency Preparedness / Riley County Official Website.* (n.d.). Retrieved March 2, 2023, from <https://www.rileycountyks.gov/1239/Emergency-Preparedness>.

Appendix 1: RCHD CASPER Surveys

Riley County CASPER Preparedness

Demographic Information	
Q1. Type of structure <input type="checkbox"/> Single family <input type="checkbox"/> Multiple unit <input type="checkbox"/> Mobile home <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	Q8. How often in the past 12 months would you say your HH was worried or stressed about having enough money to buy nutritious meals? Would you say your HH was worried or stressed <input type="checkbox"/> Always <input type="checkbox"/> Usually <input type="checkbox"/> Sometimes <input type="checkbox"/> Rarely <input type="checkbox"/> Never <input type="checkbox"/> DK <input type="checkbox"/> RF
Q2. Including yourself, how many people live in your HH? _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	Q9. Does your current homeowner's insurance policy cover 1. Flood damage <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Fire damage <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Tornado damage <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Straight wind damage <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q3. Including yourself, how many people living in your HH are <input type="checkbox"/> Less than 2 years old <input type="checkbox"/> 2-17 years <input type="checkbox"/> 18-64 years <input type="checkbox"/> 65+ years <input type="checkbox"/> DK <input type="checkbox"/> RF	Q10. Have you or a member of your HH ever been told by a healthcare professional that he/she has 1. Asthma/COPD/Emphysema <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Diabetes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Developmental disability <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Hypertension/heart disease <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 5. Immunosuppressed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 6. Physical disability <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 7. Psychosocial/mental illness <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q4. What race does majority of your HH identify with? <input type="checkbox"/> Asian <input type="checkbox"/> American Indian/Alaska Native <input type="checkbox"/> Black or African American <input type="checkbox"/> White <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> Hispanic or Latino <input type="checkbox"/> DK <input type="checkbox"/> RF	Q11. Do you or does any member of your HH need 1. Daily medication <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Dialysis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Home health care <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Oxygen supply <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 5. Wheelchair/cane/walker <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 6. Other type of special care <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q5. What is the main language spoken in your HH? <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	Q12. In the past 5 years, have you or anybody in your HH taken training in 1. First aid <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. CPR <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. CERT <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q6. What is the marital status of your head of HH? <input type="checkbox"/> Married/unmarried couple <input type="checkbox"/> Separated/divorced <input type="checkbox"/> Widowed <input type="checkbox"/> Never married <input type="checkbox"/> DK <input type="checkbox"/> RF	Q13. In the past year, have you reviewed, created, or practiced emergency plans with your HH? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q7. How often in the past 12 months would you say your HH was worried or stressed about having enough money to pay your rent/mortgage? Would you say your HH was worried or stressed <input type="checkbox"/> Always <input type="checkbox"/> Usually <input type="checkbox"/> Sometimes <input type="checkbox"/> Rarely <input type="checkbox"/> Never <input type="checkbox"/> DK <input type="checkbox"/> RF	Q14. How would you classify your HH's overall emergency preparedness? <input type="checkbox"/> Not at all prepared <input type="checkbox"/> Slightly prepared <input type="checkbox"/> Moderately prepared <input type="checkbox"/> Very prepared <input type="checkbox"/> DK <input type="checkbox"/> RF
Communications	
Q15. Do you or does anyone in your HH have any of the following? 1. Impaired hearing <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Impaired vision <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Developmental/cognitive disability <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Difficulty understanding English <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 5. Difficulty understanding written material <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	
Q16. What is your HH's main source of information about disasters or emergency events? (Check one) <input type="checkbox"/> Newspaper <input type="checkbox"/> TV <input type="checkbox"/> Radio <input type="checkbox"/> Internet/Online news <input type="checkbox"/> Friends/Family/Word of mouth <input type="checkbox"/> social media <input type="checkbox"/> Text message/Cell phone alert <input type="checkbox"/> Church/Place of worship <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	Q17. Is your HH aware of the following materials to better prepare you and your family for a natural disaster or other significant event? 1. Ready.gov resources <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Educational booklet [handout] <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Situational Preparedness	
Q18. Does your HH have any of the following emergency plans 1. Emergency communication plan such as a list of numbers and designated out-of-town contact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Designated meeting place immediately outside your home or close by in your neighborhood <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Designated meeting place outside of your neighborhood in case you cannot return home <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	

Q27. What is your HH's current source of important information? <input type="checkbox"/> Newspaper <input type="checkbox"/> TV <input type="checkbox"/> Radio <input type="checkbox"/> Internet/Online news <input type="checkbox"/> Friends/Family/Word of mouth <input type="checkbox"/> social media <input type="checkbox"/> Text message/Cell phone alert <input type="checkbox"/> Church/Place of worship <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	Q28. Has your HH received information from the health department regarding any of the following? 1. Mold/mildew cleanup <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Cistern treatment <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Food/water distribution <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Medical care access <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 5. Other services (please specify) _____ <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Miscellaneous	
Q29. How would you describe the damage to you home? <input type="checkbox"/> Not at all damaged <input type="checkbox"/> Minorly damaged <input type="checkbox"/> Moderately damaged <input type="checkbox"/> Severely damaged <input type="checkbox"/> DK <input type="checkbox"/> RF	Q31. Did you or members of your HH hear about this survey prior to us talking to you today? (If yes, proceed to question 32) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q30. Have you seen mold or smelled moldy/musty air in your home since the flood? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q32. How did you or you HH member(s) hear about it? (Check all that apply) <input type="checkbox"/> social media <input type="checkbox"/> Website <input type="checkbox"/> Press release <input type="checkbox"/> E-mail <input type="checkbox"/> Family/Friend/Neighbor <input type="checkbox"/> Radio <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF
Q33. What is your HH's greatest need right now? <input type="checkbox"/> No current needs <input type="checkbox"/> Food <input type="checkbox"/> Electricity <input type="checkbox"/> Water <input type="checkbox"/> Medical care <input type="checkbox"/> Medications <input type="checkbox"/> Transportation <input type="checkbox"/> Physical help with cleanup and repairs <input type="checkbox"/> Financial help <input type="checkbox"/> Trash removal <input type="checkbox"/> Shelter <input type="checkbox"/> Mental health needs <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	

Riley County CASPER Tornado

Demographic Information	
Q1. Type of structure <input type="checkbox"/> Single family <input type="checkbox"/> Multiple unit <input type="checkbox"/> Mobile home <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	Q7. Since the tornado, how concerned would you say your HH is about having enough money to buy nutritious meals? <input type="checkbox"/> Not at all concerned <input type="checkbox"/> Slightly concerned <input type="checkbox"/> Moderately concerned <input type="checkbox"/> Very concerned <input type="checkbox"/> DK <input type="checkbox"/> RF
Q2. Including yourself, how many people live in your HH? _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	Q8. Does your homeowner's insurance policy cover 1. Flood damage <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Fire damage <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Tornado damage <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Straight wind damage <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q3. Including yourself, how many people living in your HH are <input type="checkbox"/> Less than 2 years old <input type="checkbox"/> 2-17 years <input type="checkbox"/> 18-64 years <input type="checkbox"/> 65+ years <input type="checkbox"/> DK <input type="checkbox"/> RF	Q9. Have you or a member of your HH ever been told by a healthcare professional that he/she has 1. Asthma/COPD/Emphysema <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Diabetes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Developmental disability <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Hypertension/heart disease <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 5. Immunosuppressed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 6. Physical disability <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 7. Psychosocial/mental illness <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF *If yes, have you or a member of your HH noticed worsening of chronic conditions following the tornado? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q4. What race does majority of your HH identify with? <input type="checkbox"/> Asian <input type="checkbox"/> American Indian/Alaska Native <input type="checkbox"/> Black or African American <input type="checkbox"/> White <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> Hispanic or Latino <input type="checkbox"/> DK <input type="checkbox"/> RF	Q10. Do you or does any member of your HH need 1. Daily medication <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Dialysis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Home health care <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Oxygen supply <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 5. Wheelchair/cane/walker <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 6. Other type of special care <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q5. What is the main language spoken in your HH? <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	Q11. In the past 5 years, have you or anybody in your HH taken training in 1. First aid <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. CPR <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. CERT <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q6. Since the tornado, how concerned would you say your HH is about having enough money to pay your rent/mortgage? <input type="checkbox"/> Not at all concerned <input type="checkbox"/> Slightly concerned <input type="checkbox"/> Moderately concerned <input type="checkbox"/> Very concerned <input type="checkbox"/> DK <input type="checkbox"/> RF	Q12. Have the members of your HH received a tetanus shot in the last 10 years? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Situational Needs Assessment	
Q13. Was anyone in your HH injured during the tornado? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q17. Does your HH currently have a 3-day supply of drinking water other than tap? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q14. Have you or anyone in your HH become ill due to or since the tornado? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q18. Does your HH current have a 3-day supply of non-perishable food? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q15. Are you or anyone in you HH having trouble getting the care they need? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q19. Does each person in your HH who takes prescribed medication currently have a 7-day supply? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q16. Has there been an increase in insect bites/stings since the tornado? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q20. Does your HH currently have a first aid kit? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Communications	
Q21. Do you or does anyone in your HH have any of the following? 1. Impaired hearing <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Impaired vision <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Developmental/cognitive disability <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Difficulty understanding English <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 5. Difficulty understanding written material <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q23. What is your HH's current source of important information? <input type="checkbox"/> Newspaper <input type="checkbox"/> TV <input type="checkbox"/> Radio <input type="checkbox"/> Internet/Online news <input type="checkbox"/> Friends/Family/Word of mouth <input type="checkbox"/> social media <input type="checkbox"/> Text message/Cell phone alert <input type="checkbox"/> Church/Place of worship <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF
Q22. Does your HH currently have a working telephone? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	

Miscellaneous	
Q23. Does your HH currently have a working toilet? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q25. Does your HH currently have working electricity? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q24. Does your HH currently have means of regular waste disposal? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q26. Did you or members of your HH hear about this survey prior to us talking to you today? (If yes, proceed to question 27) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q27. How did you or you HH member(s) hear about it? (Check all that apply) <input type="checkbox"/> social media <input type="checkbox"/> Website <input type="checkbox"/> Press release <input type="checkbox"/> E-mail <input type="checkbox"/> Family/Friend/Neighbor <input type="checkbox"/> Radio <input type="checkbox"/> Other (please specify)_____ <input type="checkbox"/> DK <input type="checkbox"/> RF	
Q28. What is your HH's greatest need right now? <input type="checkbox"/> No current needs <input type="checkbox"/> Food <input type="checkbox"/> Electricity <input type="checkbox"/> Water <input type="checkbox"/> Medical care <input type="checkbox"/> Medications <input type="checkbox"/> Transportation <input type="checkbox"/> Physical help with cleanup and repairs <input type="checkbox"/> Financial help <input type="checkbox"/> Trash removal <input type="checkbox"/> Shelter <input type="checkbox"/> Mental health needs <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	

Riley County CASPER Flooding

Demographic Information	
Q1. Type of structure <input type="checkbox"/> Single family <input type="checkbox"/> Multiple unit <input type="checkbox"/> Mobile home <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	Q7. Since the flood, how concerned would you say your HH is about having enough money to buy nutritious meals? <input type="checkbox"/> Not at all concerned <input type="checkbox"/> Slightly concerned <input type="checkbox"/> Moderately concerned <input type="checkbox"/> Very concerned <input type="checkbox"/> DK <input type="checkbox"/> RF
Q2. Including yourself, how many people live in your HH? _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	Q8. Does your current homeowner's insurance policy cover 1. Flood damage <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Fire damage <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q3. Including yourself, how many people living in your HH are <input type="checkbox"/> Less than 2 years old <input type="checkbox"/> 2-17 years <input type="checkbox"/> 18-64 years <input type="checkbox"/> 65+ years <input type="checkbox"/> DK <input type="checkbox"/> RF	Q9. Have you or a member of your HH ever been told by a healthcare professional that he/she has 1. Asthma/COPD/Emphysema <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Diabetes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Developmental disability <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Hypertension/heart disease <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 5. Immunosuppressed <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 6. Physical disability <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 7. Psychosocial/mental illness <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF *If yes, have you or a member of your HH noticed worsening of chronic conditions following the flood? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q4. What race does majority of your HH identify with? <input type="checkbox"/> Asian <input type="checkbox"/> American Indian/Alaska Native <input type="checkbox"/> Black or African American <input type="checkbox"/> White <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> Hispanic or Latino <input type="checkbox"/> DK <input type="checkbox"/> RF	Q10. Do you or does any member of your HH need 1. Daily medication <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Dialysis <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Home health care <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Oxygen supply <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 5. Wheelchair/cane/walker <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 6. Other type of special care <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
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Q6. Since the flood, how concerned would you say your HH is about having enough money to pay your rent/mortgage? <input type="checkbox"/> Not at all concerned <input type="checkbox"/> Slightly concerned <input type="checkbox"/> Moderately concerned <input type="checkbox"/> Very concerned <input type="checkbox"/> DK <input type="checkbox"/> RF	Q12. Have the members of your HH received a tetanus shot in the last 10 years? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Situational Needs Assessment	
Q13. Was anyone in your HH injured during the flood? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q19. Does your HH currently have a 3-day supply of drinking water other than tap? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q14. Have you or anyone in your HH become ill due to or since the flood? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q20. Does your HH currently have a 3-day supply of non-perishable food? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q15. Are you or anyone in you HH having trouble getting the care they need? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q21. Does each person in your HH who takes prescribed medication currently have a 7-day supply? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q16. Has there been an increase in insect bites/stings since the flood? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q22. Does your HH currently have a first aid kit? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q17. Does your HH currently have a working toilet? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q23. Does your HH currently have working electricity? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q18. Does your HH currently have means of regular waste disposal? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q24. Has your HH noticed an increase in the number of rats/mice? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Communications	
Q25. Do you or does anyone in your HH have any of the following? 1. Impaired hearing <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Impaired vision <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Developmental/cognitive disability <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Difficulty understanding English <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 5. Difficulty understanding written material <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q26. Does your HH currently have a working telephone? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF

Q27. What is your HH's current source of important information? <input type="checkbox"/> Newspaper <input type="checkbox"/> TV <input type="checkbox"/> Radio <input type="checkbox"/> Internet/Online news <input type="checkbox"/> Friends/Family/Word of mouth <input type="checkbox"/> social media <input type="checkbox"/> Text message/Cell phone alert <input type="checkbox"/> Church/Place of worship <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	Q28. Has your HH received information from the health department regarding any of the following? 1. Mold/mildew cleanup <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 2. Cistern treatment <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 3. Food/water distribution <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 4. Medical care access <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF 5. Other services (please specify) _____ <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Miscellaneous	
Q29. How would you describe the damage to you home? <input type="checkbox"/> Not at all damaged <input type="checkbox"/> Minorly damaged <input type="checkbox"/> Moderately damaged <input type="checkbox"/> Severely damaged <input type="checkbox"/> DK <input type="checkbox"/> RF	Q31. Did you or members of your HH hear about this survey prior to us talking to you today? (If yes, proceed to question 32) <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF
Q30. Have you seen mold or smelled moldy/musty air in your home since the flood? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK <input type="checkbox"/> RF	Q32. How did you or you HH member(s) hear about it? (Check all that apply) <input type="checkbox"/> social media <input type="checkbox"/> Website <input type="checkbox"/> Press release <input type="checkbox"/> E-mail <input type="checkbox"/> Family/Friend/Neighbor <input type="checkbox"/> Radio <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF
Q33. What is your HH's greatest need right now? <input type="checkbox"/> No current needs <input type="checkbox"/> Food <input type="checkbox"/> Electricity <input type="checkbox"/> Water <input type="checkbox"/> Medical care <input type="checkbox"/> Medications <input type="checkbox"/> Transportation <input type="checkbox"/> Physical help with cleanup and repairs <input type="checkbox"/> Financial help <input type="checkbox"/> Trash removal <input type="checkbox"/> Shelter <input type="checkbox"/> Mental health needs <input type="checkbox"/> Other (please specify) _____ <input type="checkbox"/> DK <input type="checkbox"/> RF	

Appendix 2: Overview of Riley County Emergency Operations Plan

RGHD EOP



Emergency Operations Plan

FOR OFFICIAL USE ONLY

NOTICE: This document contains information pertaining to the deployment, mobilization, and tactical operations of Riley County Health Department in response to emergencies. It is exempt from public disclosure under Kansas state law.

Last Updated: 11/30/2022

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Appendix 3: Riley County Emergency Action Guide



Riley County Health Department Emergency Action Guide

Last Updated: 12/5/2022

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Figure 1: Riley County Health Department Campus Outdoor Assembly Areas

Figure 2: Clinic & Administration Building, First Floor

Figure 3: Clinic & Administration Building, Second Floor

Figure 4: Family & Child Resource Center, First Floor

Figure 5: Family & Child Resource Center, Second Floor

	Evacuation Map		Fire Extinguisher
	Fire Exit Path		Emergency Pull Box
	Tornado Safe Zone		Defibrillator (AED)
	Tornado Refuge Area		Intercom (w/ zone #)
	Tornado Shelter Path		

Appendix 4: Riley County Emergency Preparedness Guide

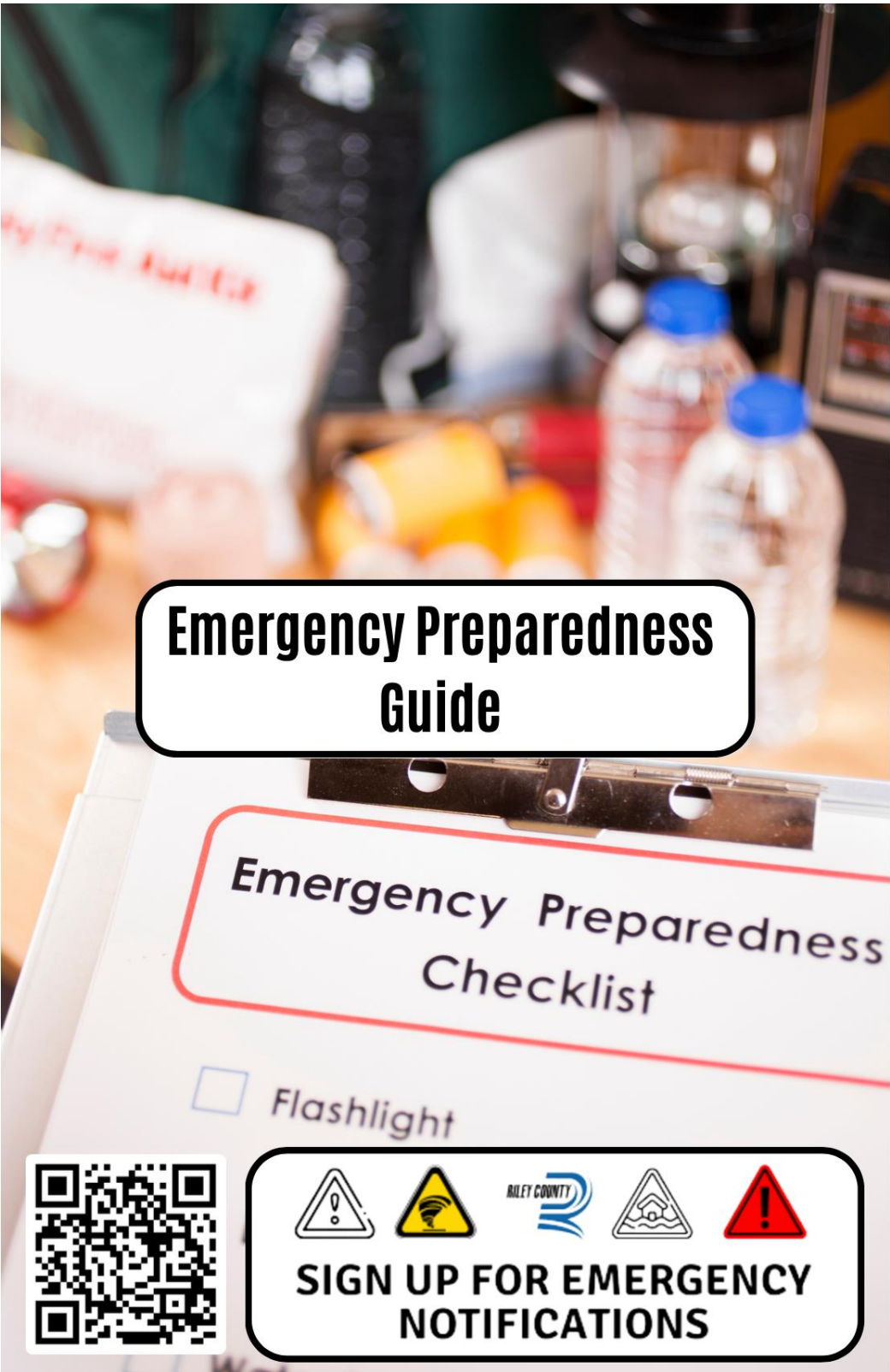


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Page 2

Preparing for thunderstorms

Know your risk and sign up for your community's warning system

Terms to know

Severe thunderstorm watch:
severe thunderstorms are likely to occur

Severe thunderstorm warning:
severe thunderstorms have been spotted, and people in the path of the storm are in danger

Thunderstorms:

- Include powerful winds
- Create lightning and hail
- Cause flash flooding and tornadoes

Take an Active Role in Your Safety
Go to Ready.gov and search for thunderstorm, lightning, or hail.
Download the FEMA app to get more information about preparing for thunderstorm, lightning, or hail.

Cut down trees that may be in danger of falling on your home

Make an emergency plan that identifies sturdy buildings to take shelter in

DID YOU KNOW?

Lightning is a leading cause of injury and death from weather-related hazards

Page 3

Staying safe during a thunderstorm

When Thunder Roars, Go Indoors!
 STOP all activities.
 Seek shelter in a substantial building or hard-topped vehicle.
 Wait 30 minutes after the storm to resume activities.
 www.fema.gov/safety

Avoid running water

If boating or swimming, get to land immediately

Avoid using electronic devices connected to an electrical outlet

Unplug appliances and other electric devices

Watch for fallen power lines and trees

Staying safe during a thunderstorm

Pay attention to authorities and weather forecasts for information on whether it is safe to go outside and other important instructions

Page 4

Floods

Floods are the most common natural disaster in the United States

If you are under a flood warning

Know your risk and sign up for your community's warning system

Make a plan for your household

Find a safe shelter right away

Move to higher ground or a higher floor

Purchase flood insurance

Go to ready.gov and search for flood. Download the FEMA app to get more information about preparing for a flood. Find Emergency Safety Tips under Prepare.

Page 5

Staying safe during a flood



Evacuate if told to evacuate



Contact your healthcare provider if you are sick and need medical attention. Call 9-1-1 in the event of a medical emergency



Stay off bridges over fast-moving water



Stay inside your car if it is trapped in a building. Get on the roof if water is rising inside the car



Listen to local alerting systems for current emergency information and instructions regarding flooding



Get to the highest level if trapped in a building. Only get on the roof if necessary and once there, signal for help. Do not climb into a closed attic to avoid getting trapped by rising flood water

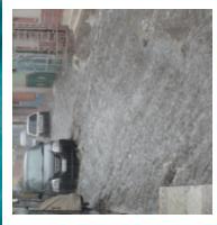


DID YOU KNOW?

When flooding is imminent or predicted, National Flood Insurance Program (NFIP) policyholders are eligible to receive up to \$1000 to purchase loss avoidance supplies

Page 6

Staying safe after a flood



Pay attention to authorities for information and instructions. Return home only when authorities say it is safe.

Avoid driving except in emergencies

Be aware that snakes and other animals may be in your house

People with asthma and other lung conditions and/or immune suppression should not enter buildings with indoor water leaks or mold growth that can be seen or smelled. Children should not take part in disaster cleanup work

Wear heavy work gloves, protective clothing and boots during clean up and use appropriate face coverings or masks if cleaning mold or other debris

Avoid wading in flood water, which can be contaminated and contain dangerous debris. Underground or downed power lines can also electrically charge the water.

Do not touch electrical equipment if it is wet or if you are standing in water. Turn off the electricity to prevent electric shock if it is safe to do so.

Page 7

Tornadoes

When under a tornado or severe weather warning:

Go to a shelter such as a safe room, basement, storm cellar, or a small interior room on the lowest level of a sturdy building

Visit local news websites and social media accounts for up-to-date information

Stay away from windows, doors, and outside walls

Do not go under an overpass or bridge. You're safer in a low, flat location

Watch out for flying debris that can cause injury or death

If you can't stay at home, make plans to go to a public shelter

Use your arms to protect your head and neck

Page 8



DID YOU KNOW?

Preparing for a tornado

Almost every state in the U.S. is subject to tornadoes

Know your area's risk and sign up for your community's warning system

Know the signs of a tornado

Pay attention to weather reports

Identify and practice going to a safe shelter

Plan for your pet(s)

Prepare for a long-term stay at home or sheltering in place

Staying safe during a tornado

Immediately go to a safe location that you have identified

Pay attention to local alerting systems

Protect yourself

Do not try to outrun a tornado in a vehicle

Staying safe after a tornado

Pay attention to local officials for updated information

Stay clear of fallen power lines or broken utility lines

Contact your healthcare provider if you are sick and need medical attention. Call 9-1-1 in the event of a medical emergency

Wear appropriate gear during clean-up

Page 9

Extreme heat

Preparing for extreme heat

Extreme heat is a period of high heat and humidity with temperatures above 90 degrees for at least two to three days

Learn to recognize the signs of heat illness

Use window reflectors specifically designed to reflect heat back outside

Do not rely on a fan as your primary cooling device

Add insulation to keep the heat out

Identify places in your community where you can go to get cool

Install window air conditioners and insulate around them

Cover the windows with drapes or shades

Use a powered attic ventilator, or attic fan, to regulate the heat level of a building's attic by clearing out hot air

Weather-strip doors and windows

DID YOU KNOW?

Extreme heat is responsible for the highest number of annual deaths among all weather-related hazards

Page 10

If you are unable to afford your cooling costs, weatherization, or energy-related home repairs, contact the Low-Income Home Energy Assistance Program (LIHEAP) for help at 1-866-674-6327

Staying safe during extreme heat

Never leave people or pets in a closed car on a warm day

If air conditioning is not available in your home, go to a cooling center

Take cool showers or baths

Wear loose, lightweight, light-colored clothing

Use your oven less to help reduce the temperature in your home

Drink plenty of fluids to stay hydrated

Avoid high energy activities or work outdoors, during midday heat, if possible

Watch for heat cramps, heat exhaustion, and stroke

Consider pet safety. If they are outside, make sure they have plenty of cool water and access to comfortable shade

If using a mask, use one that is made of breathable fabric such as cotton, instead of polyester

Page 11

Recognizing the signs of heat cramps, heat exhaustion, and heat stroke

	What to look for	What to do
Heat cramps	<ul style="list-style-type: none"> Heavy sweating during intense exercise Muscle pain or spasms 	<ul style="list-style-type: none"> Stop physical activity and move to a cool place Drink water or a sports drink Wait for cramps to go away before you do any more physical activity
Heat exhaustion	<ul style="list-style-type: none"> Heavy sweating Cold, pale, and clammy skin Fast, weak pulse Nausea or vomiting Muscle cramps Tiredness or weakness Dizziness Headache Fainting (passing out) 	<ul style="list-style-type: none"> Move to a cool place Loosen your clothes Put cool, wet clothes on your body or take a cool bath Sip water
Heat stroke	<ul style="list-style-type: none"> High body temperature (103°F or higher) Hot, red, dry, or damp skin Fast, strong pulse Headache Dizziness Nausea Confusion Losing consciousness (passing out) 	<ul style="list-style-type: none"> Call 911 right away, heat stroke is a medical emergency Move the person to a cooler place Help lower the person's temperature with cool cloths or a cool bath Do not give the person anything to drink

Winter weather

Terms to know

Winter storm warning:
Issued when hazardous winter weather in the form of heavy snow, heavy freezing rain, or heavy sleet is imminent or occurring. Winter Storm Warnings are usually issued 12 to 24 hours before the event is expected to begin.

Winter storm watch:
Alerts the public to the possibility of a blizzard, heavy snow, heavy freezing rain, or heavy sleet. Winter Storm Watches are usually issued 12 to 48 hours before the beginning of a Winter Storm.

Winter weather advisory:
Issued for accumulations of snow, freezing rain, freezing drizzle, and sleet which will cause significant inconveniences and, if caution is not exercised, could lead to life-threatening situations

If you are unable to afford your cooling costs, weatherization, or energy-related home repairs, contact the Low-Income Home Energy Assistance Program (LIHEAP) for help at 1-866-674-6327

Preparing for winter

- Prepare your home to keep out the cold with insulation, caulking, and weather stripping
- Learn how to keep your pipes from freezing
- Create a winter emergency supply kit
- Have extra batteries for radios/flashlights
- Install and test smoke alarms and carbon monoxide detectors with battery backups
- Gather supplies in case you need to stay home for several days without power

Page 14

Staying safe during winter weather

- Your stay off roads if possible. If trapped in your car, then stay inside text
- Limit your time outside. If you need to go outside, then wear layers of warm clothing. Watch for signs of frostbite and hypothermia
- Reduce the risk of heart attack by avoiding overexertion when shoveling snow and walking in the snow

DID YOU KNOW?

You should have chimney or flue professionally inspected annually. Contact your local fire department for inspector recommendations or search online.

Frostbite

Frostbite causes loss of feeling and color around the face, fingers, and toes

Signs: numbness, white or grayish-yellow skin, firm or waxy skin

Actions: Go to a warm room. Soak in warm water. Use body heat to warm. Do not massage or use a heating pad

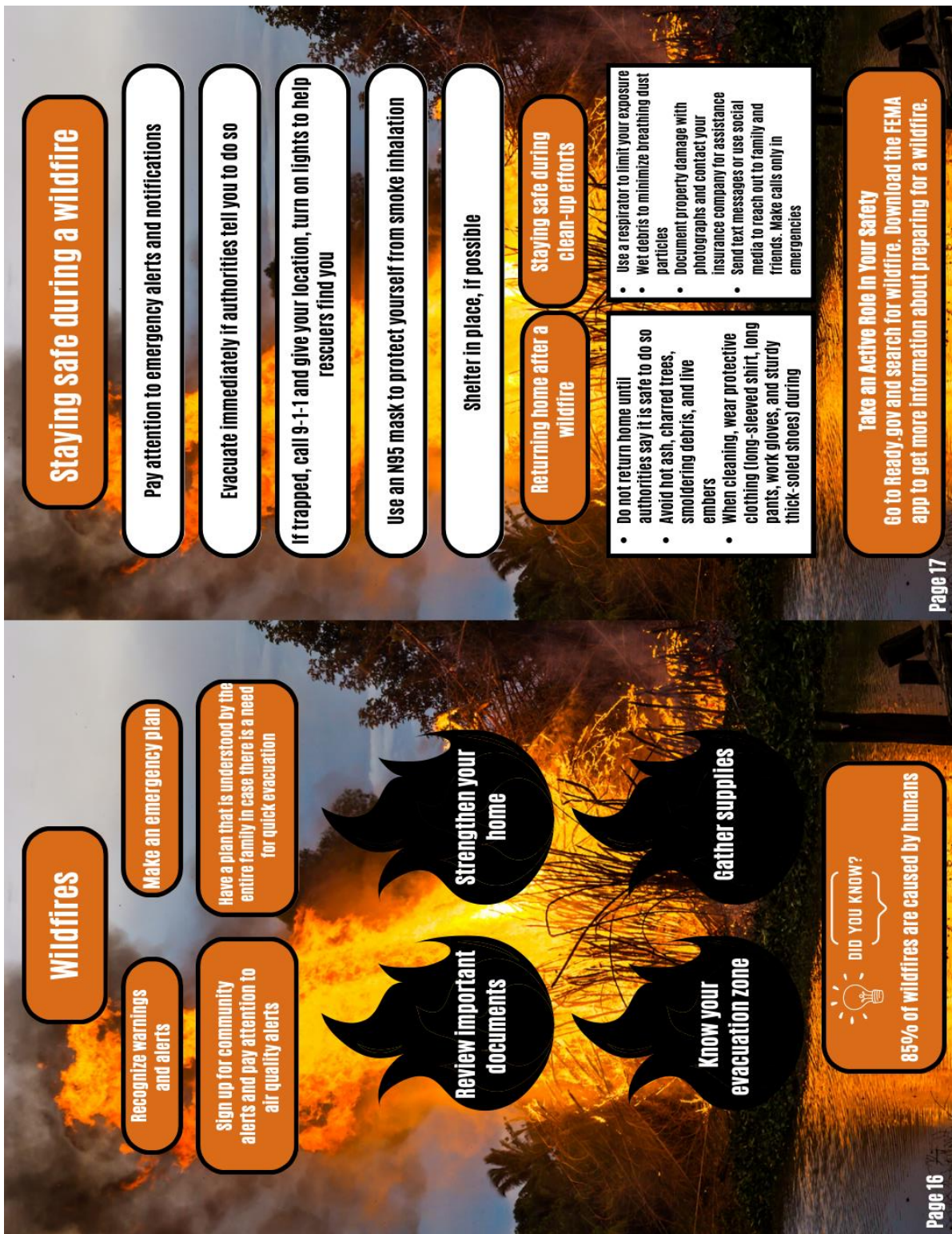
Hypothermia

Hypothermia is an unusually low body temperature. A temperature below 95 degrees is an emergency.

Signs: shivering, exhaustion, confusion, fumbling hands, memory loss, slurred speech, or drowsiness

Actions: Go to a warm room. Warm the center of the body first. Keep dry and wrapped up in warm blankets, including head and neck

Page 15



Wildfires

Recognize warnings and alerts

Make an emergency plan

Sign up for community alerts and pay attention to air quality alerts

Have a plan that is understood by the entire family in case there is a need for quick evacuation

Review important documents

Strengthen your home

Know your evacuation zone

Gather supplies



DID YOU KNOW?

85% of wildfires are caused by humans

Staying safe during a wildfire

Pay attention to emergency alerts and notifications

Evacuate immediately if authorities tell you to do so

If trapped, call 9-1-1 and give your location, turn on lights to help rescuers find you

Use an N95 mask to protect yourself from smoke inhalation

Shelter in place, if possible

Returning home after a wildfire

Staying safe during clean-up efforts

- Do not return home until authorities say it is safe to do so
- Avoid hot ash, charred trees, smoldering debris, and live embers
- When cleaning, wear protective clothing (long-sleeved shirt, long pants, work gloves, and sturdy thick-soled shoes) during

- Use a respirator to limit your exposure
- Wet debris to minimize breathing dust particles
- Document property damage with photographs and contact your insurance company for assistance
- Send text messages or use social media to reach out to family and friends. Make calls only in emergencies

Take an Active Role in Your Safety

Go to Ready.gov and search for wildfire. Download the FEMA app to get more information about preparing for a wildfire.

Bioterrorism

Biological agents are organisms or toxins that can kill or disable people, livestock, and crops. A biological attack is the deliberate release of germs or other biological substances that can make you sick.

Preparing for a biological threat

Make a family emergency plan

Check with your doctor to make sure everyone in your family has up-to-date immunizations

Consider installing a High-Efficiency Particulate Air (HEPA) filter in your furnace duct, which will filter out most biological agents that may enter your home

HAZARD

A biological attack may or may not be immediately obvious. In most cases, local health care workers will report a pattern of unusual illness or there will be a wave of sick people seeking emergency medical attention. You would be alerted through an emergency radio or TV broadcast, a telephone call, or a home visit from an emergency response worker.

Page 18

During a biological threat

The first evidence of an attack may be when you notice symptoms of the disease caused by exposure to an agent. In the event of a biological attack, public health officials may not immediately be able to provide information on what you should do. It will take time to figure out exactly what the illness is, how it should be treated, and who is in danger.

Watch tv, listen to the radio, or check the internet for official news and information

If you become aware of a suspicious substance, quickly get away

Cover your mouth and nose with layers of fabric that can filter the air but still allow breathing

If you have been exposed to a biological agent, remove, and bag your clothes and personal items. Follow instructions for official disposal of contaminated items

Avoid crowds

Wash your hands with soap and water frequently and do not share food or utensils

Follow instructions of doctors and other public health officials

Page 19

Family Communication Plan

Meeting Places

Neighborhood: _____

Community: _____

Family/Friends In Town

Name: _____

Home #: _____ Cell #: _____

Work/School#: _____

Email: _____

Name: _____

Home #: _____ Cell #: _____

Work/School#: _____

Email: _____

Name: _____

Home #: _____ Cell #: _____

Work/School#: _____

Email: _____

Neighborhood Contact

Name: _____

Home #: _____ Cell #: _____

Work/School#: _____

Email: _____

Important local phone numbers



Riley County Health
Department
(785)-776-4779

Riley County
Emergency
Management
(785)-537-6333



Pottawatomie
County Health
Department
(785)-457-3719

Pottawatomie
County
Emergency
Management
(785)-457-3358



Geary County Health
Department
(785)-762-5788

Geary County
Emergency
Management
(785)-238-1290

Police/Fire _____

Ambulance _____

Poison Control Center 1-800-222-1222

Doctor _____

Hospital _____

Local weather _____

Road conditions _____

Utilities _____

Water _____

Electricity _____

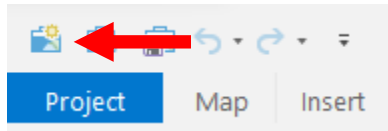
Gas _____

Telephone _____

Other _____

Appendix 5: Creating a Census Tract Level Map using Readily Available Data Resources

1. Open ArcGIS Pro 3.0 and create a new project by selecting the following icon.



2. Name the project, select your preferred location, and select "OK" to save.

3. Proceed to <https://www.census.gov/cgi-bin/geo/shapefiles/index.php> to download TIGER/Line® shapefiles for Kansas census tracts.



2021 TIGER/Line® Shapefiles: Census Tracts

Return to: [Main Download Page](#) | [TIGER/Line Shapefiles Main](#)

Census Tract

Select a State:

Source: US Census Bureau, Geography Division

CONNECT WITH US

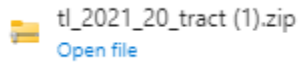
[Information Quality](#) | [Data Linkage Infrastructure](#) | [Data Protection and Privacy Policy](#) | [Accessibility](#)
[No FEAR Act](#) | [U.S. Department of Commerce](#) | [USA.gov](#)

Measuring America's People, Places, and Economy

Click the drop-down menu to select your chosen state.








Select download to download the necessary shape files to your computer.

- The downloaded information will include a .zip file and all of the files that will need to be extracted.

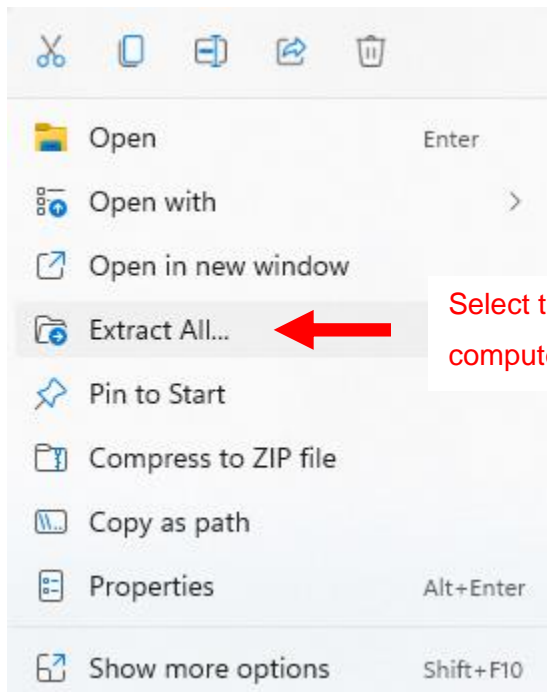


Select "Open file" to view the folder's contents.

Your folder should contain all of the following file types.

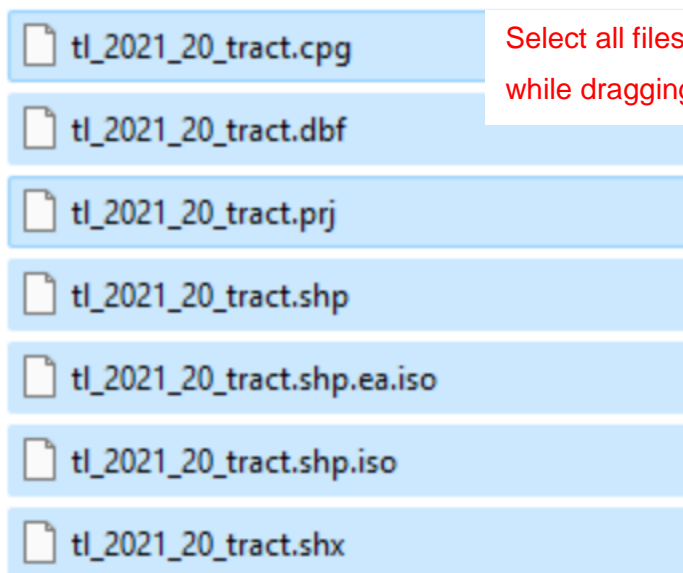
 tl_2021_20_tract.cpg	CPG File
 tl_2021_20_tract.dbf	DBF File
 tl_2021_20_tract.prj	PRJ File
 tl_2021_20_tract.shp	SHP File
 tl_2021_20_tract.shp.ea.iso	XML Document
 tl_2021_20_tract.shp.iso	XML Document
 tl_2021_20_tract.shx	SHX File

5. Once you confirm that your folder is complete. Locate the .zip file on your computer and right-click to open the following task menu.

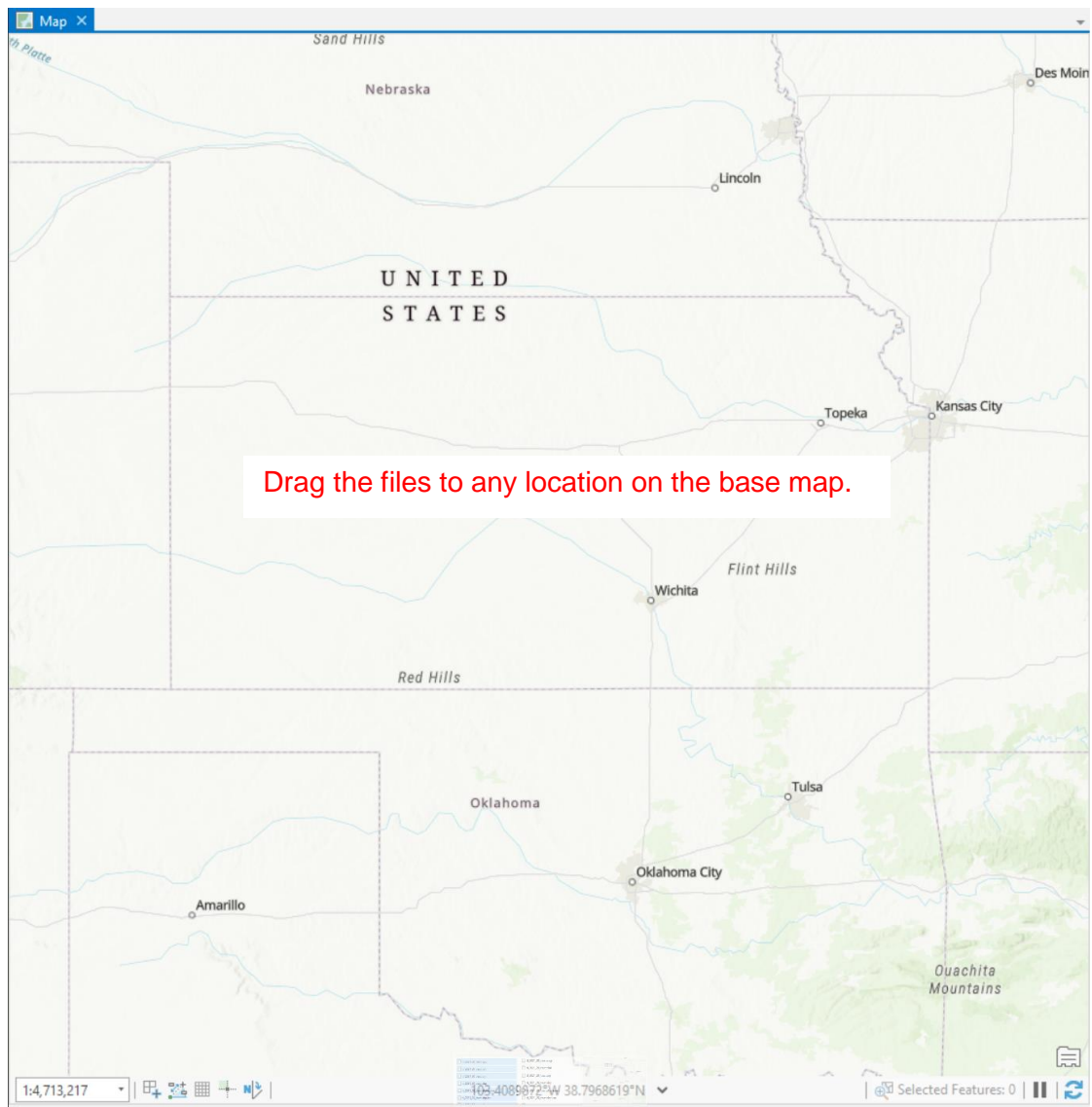


Select this option to extract the files onto your computer.

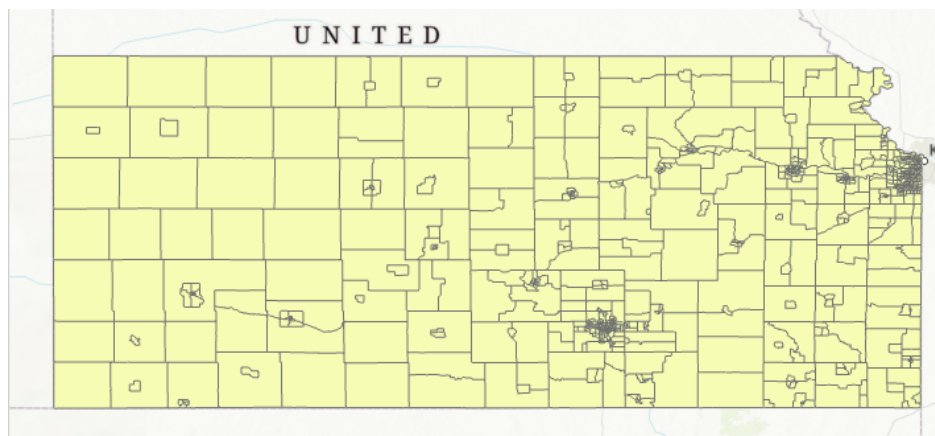
6. Once all files have been extracted, select all the files simultaneously and drag them onto your map.



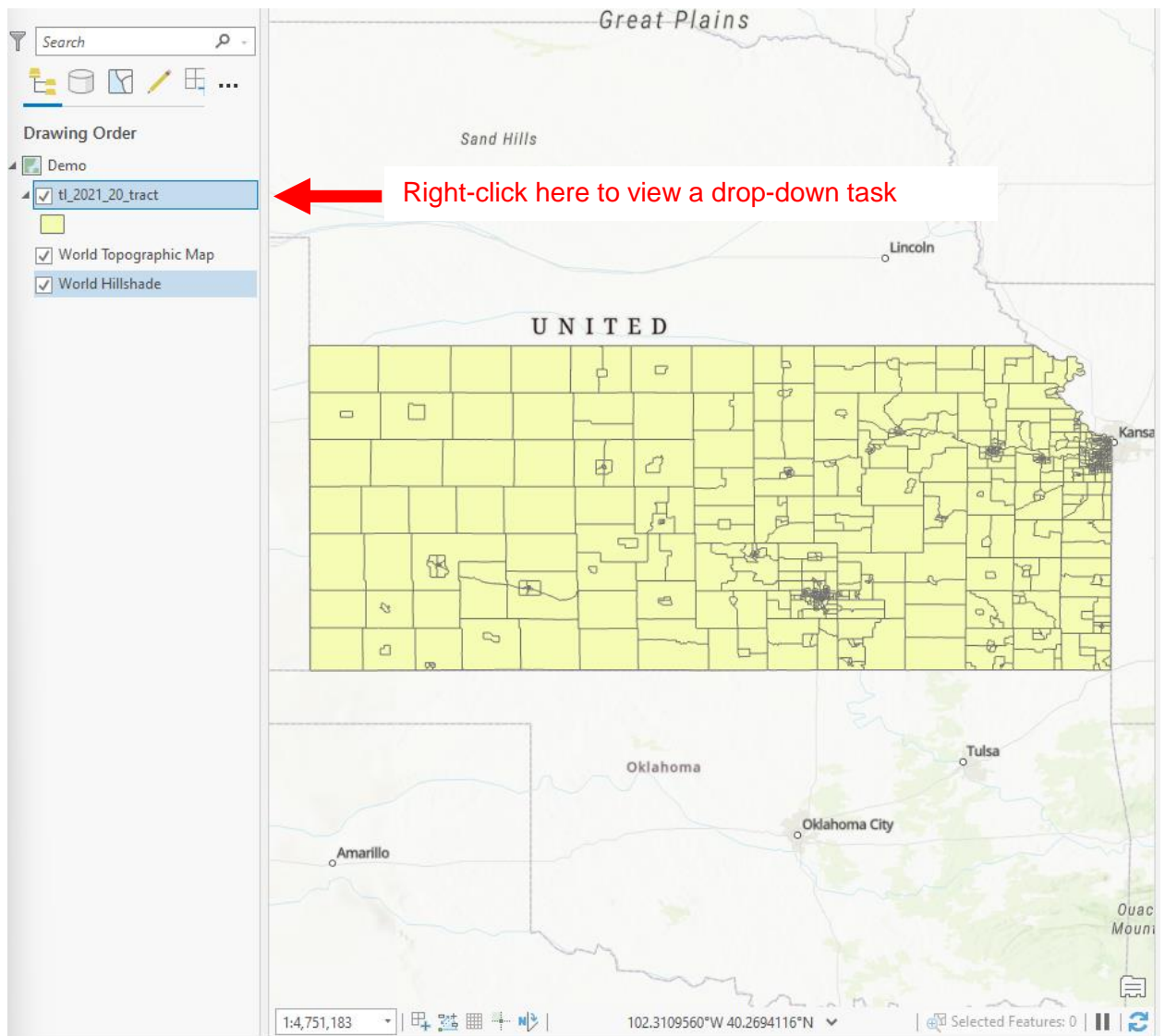
Select all files simultaneously by left clicking while dragging the cursor over all the files.



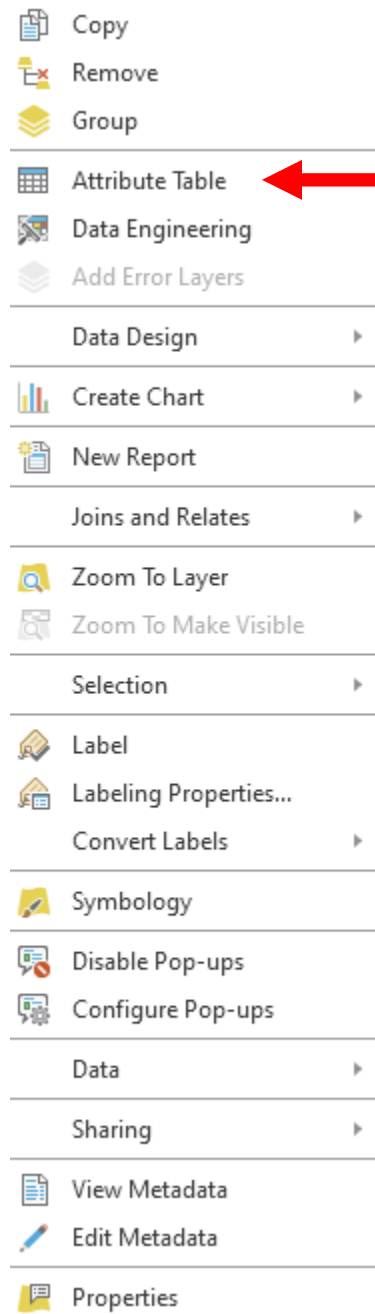
At this point, you will see a map of Kansas that is divided by census tract. Your map will look similar to the one below.



7. Confirm the successful transfer of all census tract information by right-clicking your new layer name and selecting “attribute table”.

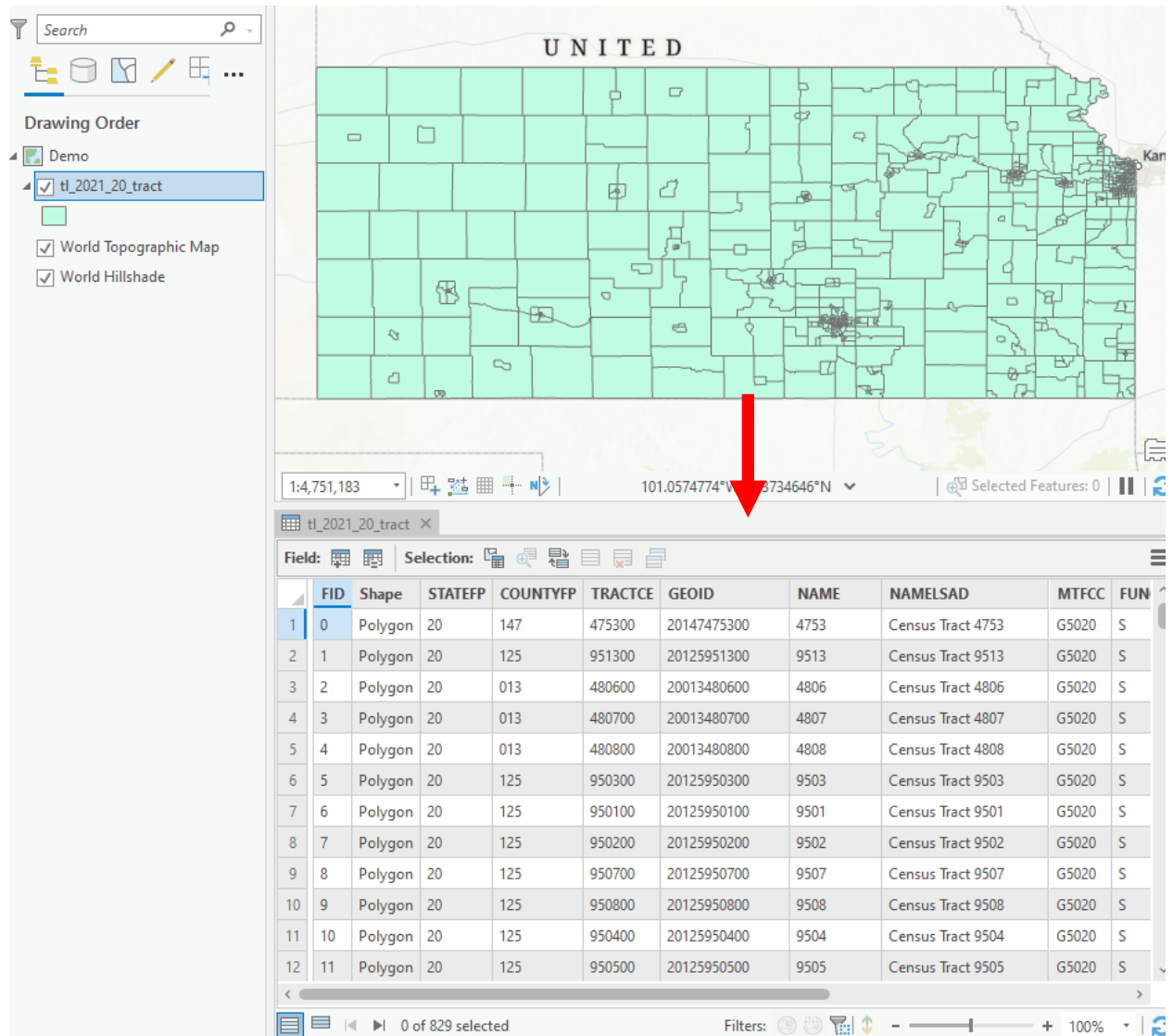


You should see the following menu:



Select here to view the census data that is currently being stored by the software.

The attribute table should be located below the map in the following format:



The screenshot shows the ArcGIS Desktop interface. On the left, the 'Drawing Order' pane lists the layers: 'Demo', 'tl_2021_20_tract' (selected), 'World Topographic Map', and 'World Hillshade'. The map area displays a grid of census tracts in light green. A red arrow points from the map to the attribute table below. The attribute table for 'tl_2021_20_tract' is open, showing the following data:

	FID	Shape	STATEFP	COUNTYFP	TRACTCE	GEOID	NAME	NAMELSAD	MTFCC	FUN
1	0	Polygon	20	147	475300	20147475300	4753	Census Tract 4753	G5020	S
2	1	Polygon	20	125	951300	20125951300	9513	Census Tract 9513	G5020	S
3	2	Polygon	20	013	480600	20013480600	4806	Census Tract 4806	G5020	S
4	3	Polygon	20	013	480700	20013480700	4807	Census Tract 4807	G5020	S
5	4	Polygon	20	013	480800	20013480800	4808	Census Tract 4808	G5020	S
6	5	Polygon	20	125	950300	20125950300	9503	Census Tract 9503	G5020	S
7	6	Polygon	20	125	950100	20125950100	9501	Census Tract 9501	G5020	S
8	7	Polygon	20	125	950200	20125950200	9502	Census Tract 9502	G5020	S
9	8	Polygon	20	125	950700	20125950700	9507	Census Tract 9507	G5020	S
10	9	Polygon	20	125	950800	20125950800	9508	Census Tract 9508	G5020	S
11	10	Polygon	20	125	950400	20125950400	9504	Census Tract 9504	G5020	S
12	11	Polygon	20	125	950500	20125950500	9505	Census Tract 9505	G5020	S

At the bottom of the attribute table, it indicates '0 of 829 selected' and 'Filters: 100%'.

- Next, prepare your chosen data for ArcGIS. Excel data can be downloaded from several sources. Once this data is downloaded onto your computer, create short column headings, and check to ensure there are no non-numerical values in columns where there should not be.

9. Your dataset should also include a column that allows for the spatial joining of layers. This should be an identifying numeric value that is consistent in each census tract in both the shapefiles and your data file. See below for an example.

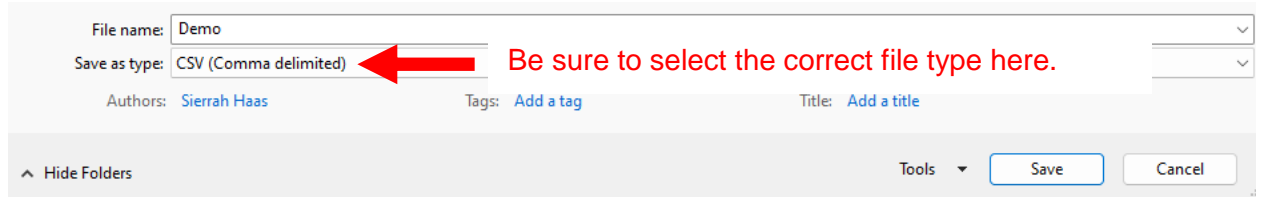
ArcGIS attribute table including GEOID.

	FID	Shape	STATEFP	COUNTYFP	TRACTCE	GEOID	NAMELSAD	MTFCC	FUN
1	0	Polygon	20	147	475300	20147475300	4753	Census Tract 4753	G5020 S
2	1	Polygon	20	125	951300	20125951300	9513	Census Tract 9513	G5020 S
3	2	Polygon	20	013	480600	20013480600	4806	Census Tract 4806	G5020 S
4	3	Polygon	20	013	480700	20013480700	4807	Census Tract 4807	G5020 S
5	4	Polygon	20	013	480800	20013480800	4808	Census Tract 4808	G5020 S
6	5	Polygon	20	125	950300	20125950300	9503	Census Tract 9503	G5020 S
7	6	Polygon	20	125	950100	20125950100	9501	Census Tract 9501	G5020 S
8	7	Polygon	20	125	950200	20125950200	9502	Census Tract 9502	G5020 S
9	8	Polygon	20	125	950700	20125950700	9507	Census Tract 9507	G5020 S
10	9	Polygon	20	125	950800	20125950800	9508	Census Tract 9508	G5020 S
11	10	Polygon	20	125	950400	20125950400	9504	Census Tract 9504	G5020 S
12	11	Polygon	20	125	950500	20125950500	9505	Census Tract 9505	G5020 S

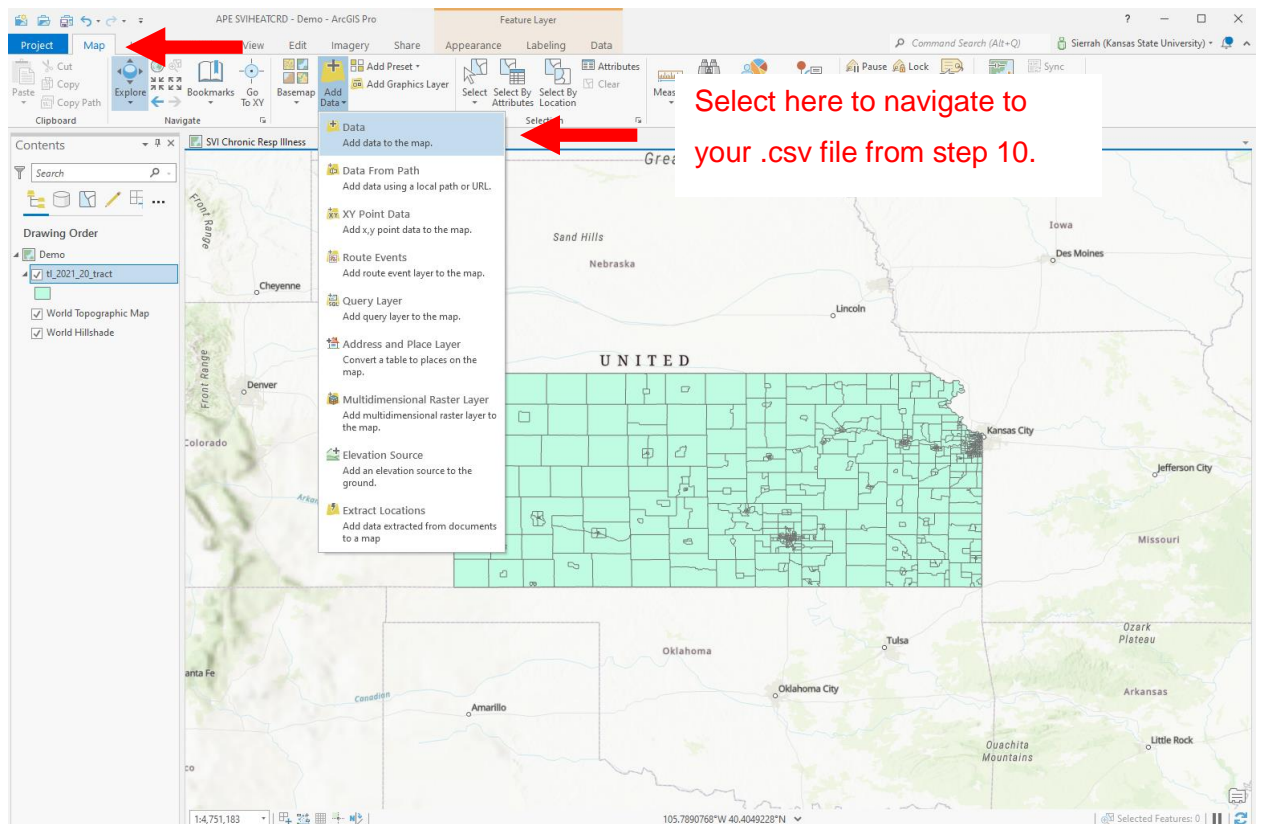
Excel table including GEOID.

	A	B	C	D	E	F
	OBJECTID	OBJECTID	GEOID	Tract	CountyGE	CountyNa
1	1	26419	2E+10	Census Tr	20001	Allen Cou
2	2	26420	2E+10	Census Tr	20001	Allen Cou
3	3	26421	2E+10	Census Tr	20001	Allen Cou
4	4	26422	2E+10	Census Tr	20001	Allen Cou
5	5	26423	2E+10	Census Tr	20001	Allen Cou
6	6	26424	2E+10	Census Tr	20003	Anderson
7	7	26425	2E+10	Census Tr	20003	Anderson
8	8	26426	2E+10	Census Tr	20005	Atchison C
9	9	26427	2E+10	Census Tr	20005	Atchison C
10	10	26428	2E+10	Census Tr	20005	Atchison C
11	11	26429	2E+10	Census Tr	20005	Atchison C
12	12	26430	2E+10	Census Tr	20007	Barber Co
13	13	26431	2E+10	Census Tr	20007	Barber Co
14	14	26432	2E+10	Census Tr	20009	Barton Co
15	15	26433	2E+10	Census Tr	20009	Barton Co
16	16	26434	2E+10	Census Tr	20009	Barton Co
17	17	26435	2E+10	Census Tr	20009	Barton Co
18	18	26436	2E+10	Census Tr	20009	Barton Co
19	19	26437	2E+10	Census Tr	20009	Barton Co
20	20	26438	2E+10	Census Tr	20009	Barton Co
21	21	26439	2E+10	Census Tr	20009	Barton Co
22	22	26440	2E+10	Census Tr	20011	Bourbon C

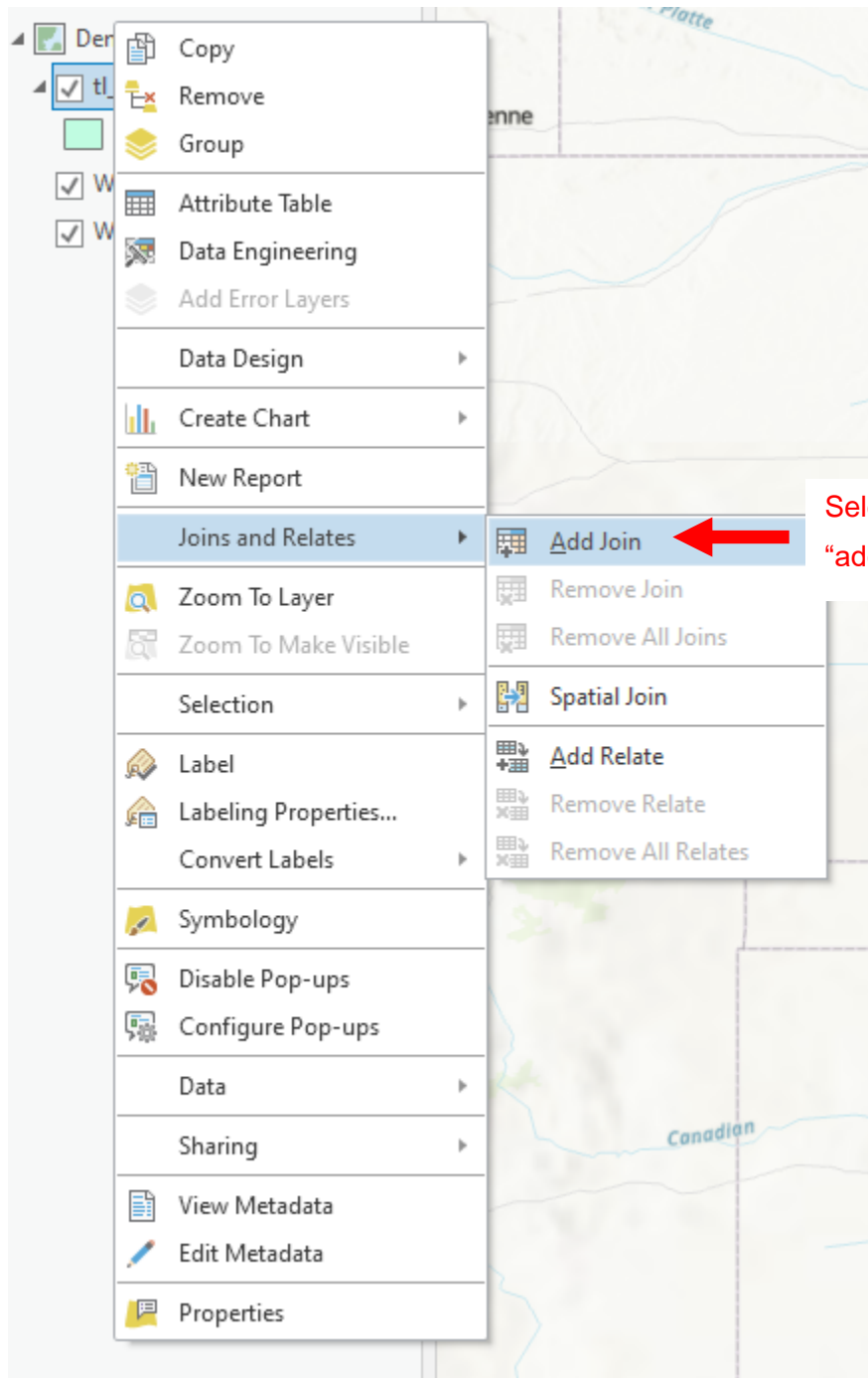
10. After preparation of your data file, this file should be saved as CSV (Comma delimited) (*.csv) in your chosen location.



11. Now, under the “Map” tab on ArcGIS Pro, click “Add Data”, and navigate to your CSV file to insert your data into the software. At this point, your data will be in your project as a table.



12. Next, right-click on your census tract layer and select “joins and relates” -> “add join”.
This will create an “add join” pop-up.



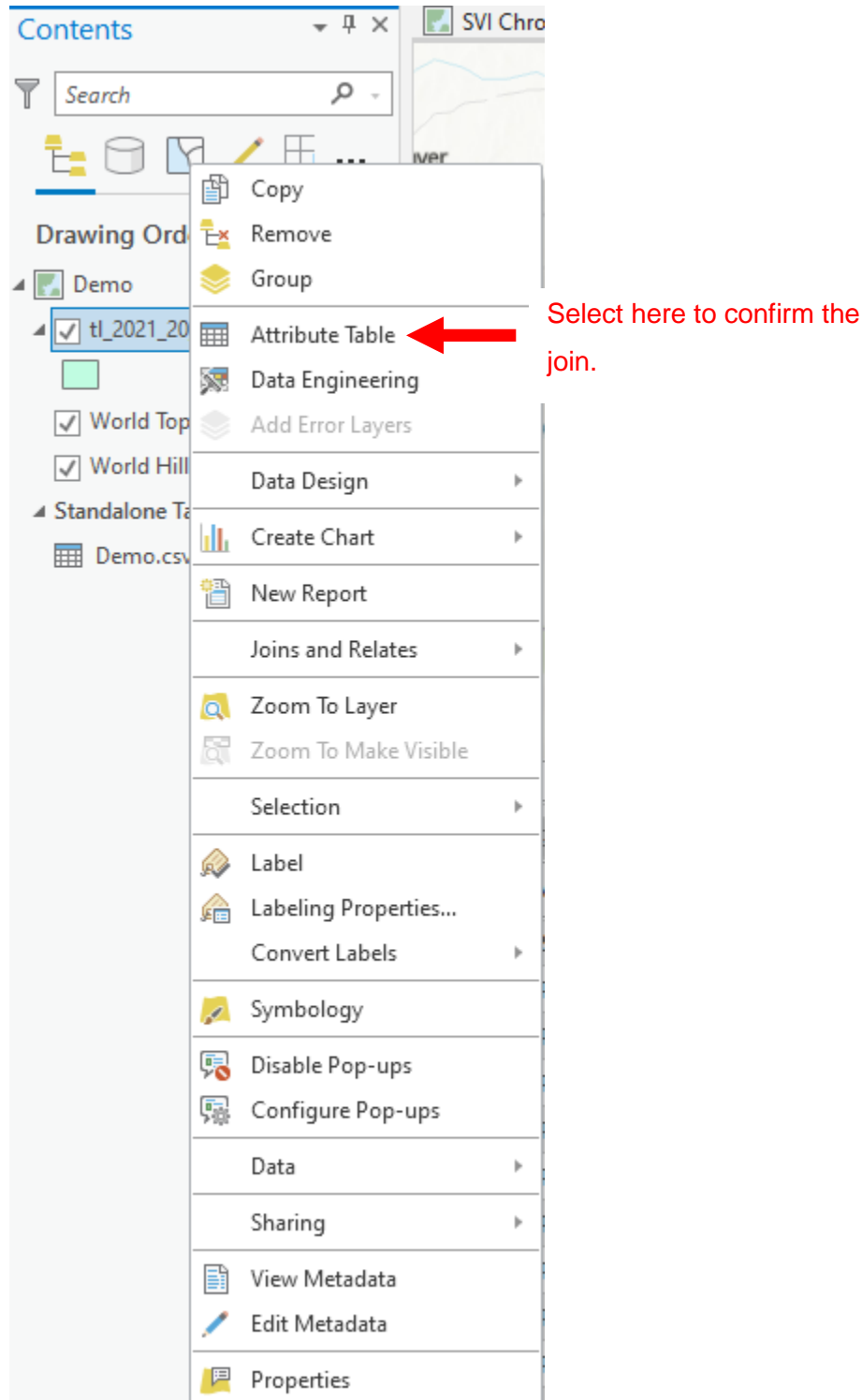
Select here to navigate to the
“add join” table.

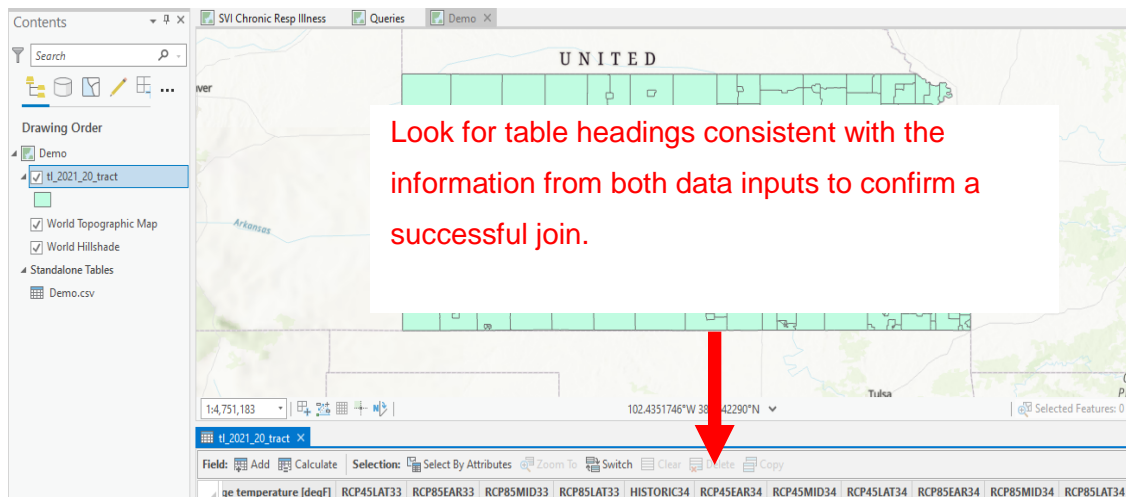
In this pop-up, “input table” should remain as your selected layer, “input join field” should be the column label of the numeric value mentioned in step 9, “join table” should be your CSV file, and “join table field” should be the name of the column in the CSV file that matches the numerical values in the “input join field”. Select “OK” to create the join. Below is an example of the table you should see, along with example inputs.

The screenshot shows the 'Add Join' dialog box with the following configuration:

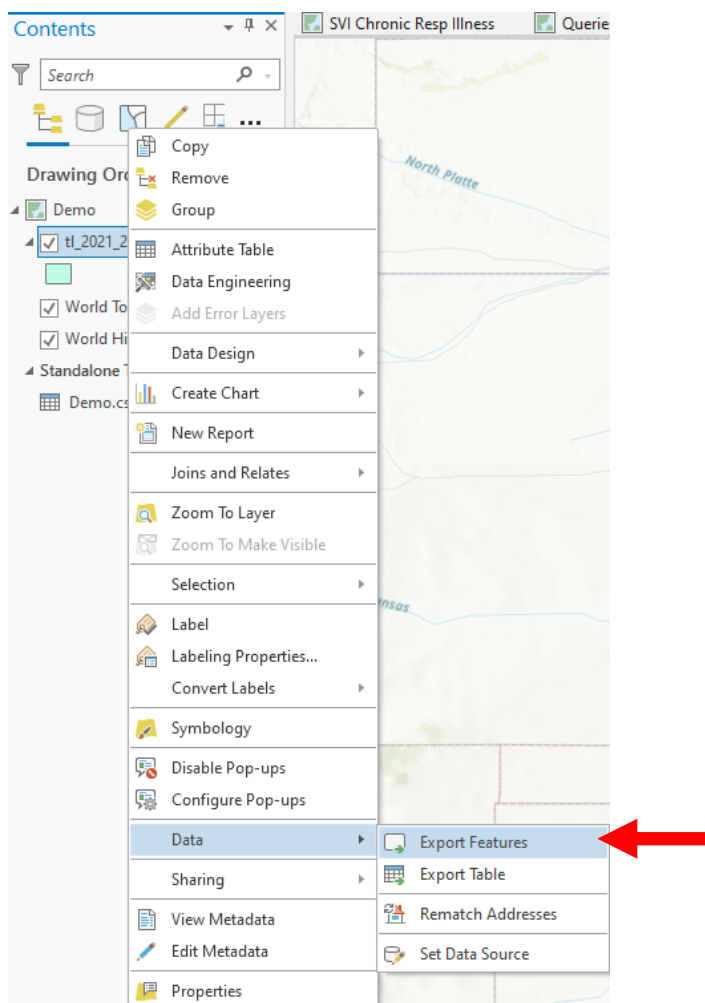
- Input Table:** tl_2021_20_tract
- Input Join Field:** GEOID
- Join Table:** Demo.csv
- Join Table Field:** GEOID
- ☒ Keep All Target Features
- ☐ Index Joined Fields
- Buttons:** Validate Join, OK (highlighted with a red arrow)

13. To confirm the join, right-click on your layer and select “attribute table”. This should show you a table including the census tracts and the new fields from the data joined.





- Once you have confirmed the join, right-click on your layer, and select “data” -> “export features”.



Name your “output feature class” as you wish and select “run” to save the new join to your project.

Export Features

Parameters | Environments

Input Features: tl_2021_20_tract

Output Location: APE SVIHEATCRD.gdb

Output Name: Demo

Expression: Load Save Remove

Where: Select a field

+ Add Clause

SQL: ☐ ☒

Fields

Field Map

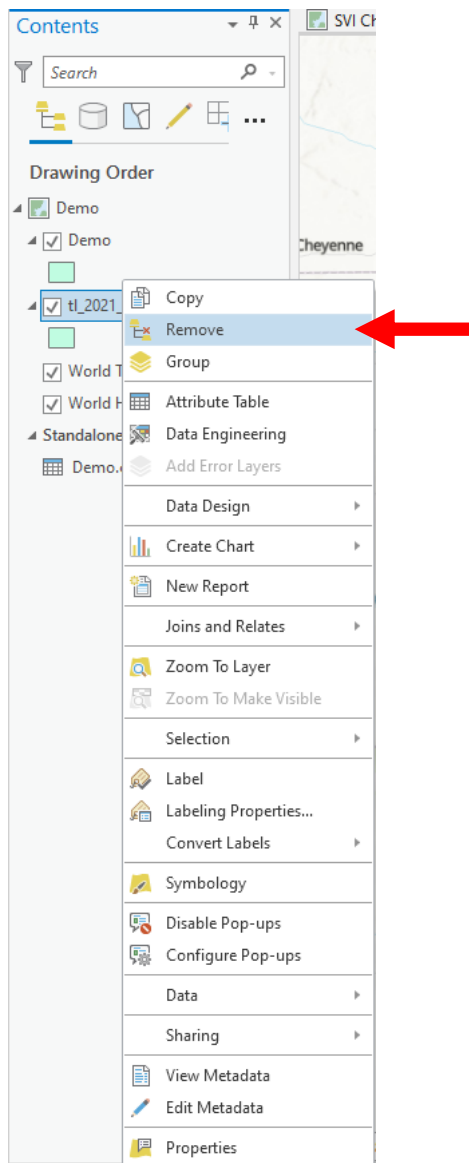
Output Fields (+)	Source	Properties
STATEFP	Merge Rule	First
COUNTYFP	tl_2021_20_tract	
TRACTCE	> tl_2021_20_tract.STATEFP	

OK

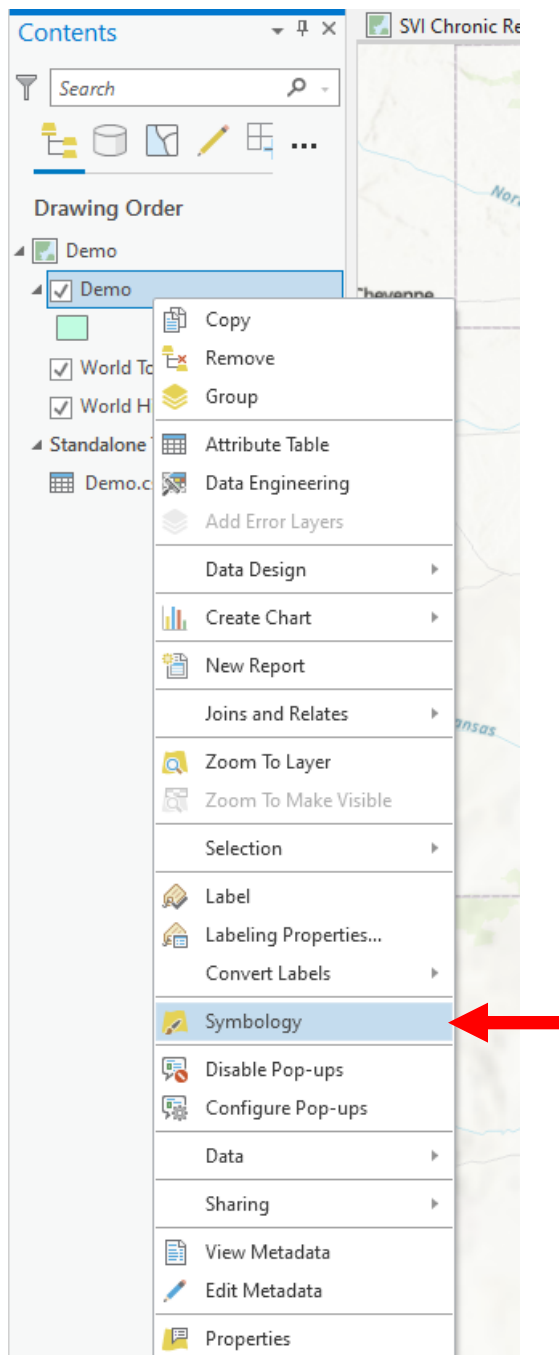
Select a location for saving.

Name your layer.

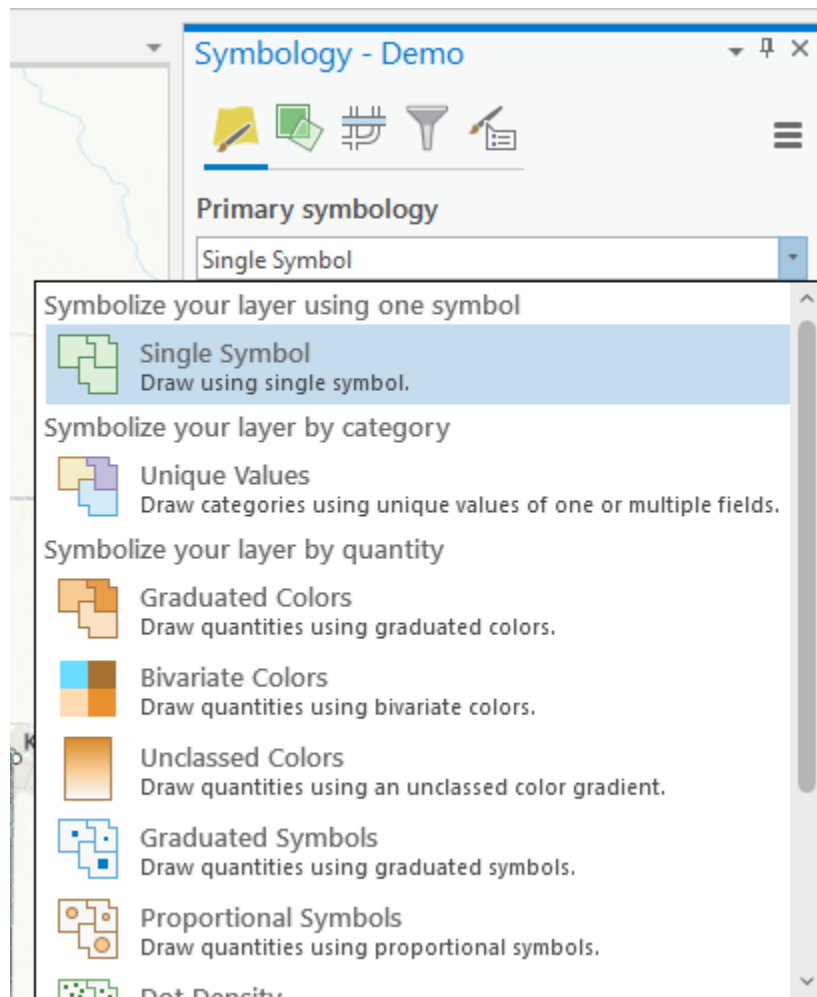
15. Since we now have all the desired information in one layer, the original census tract layer can be removed. To do so, right-click on the layer and select “remove”.



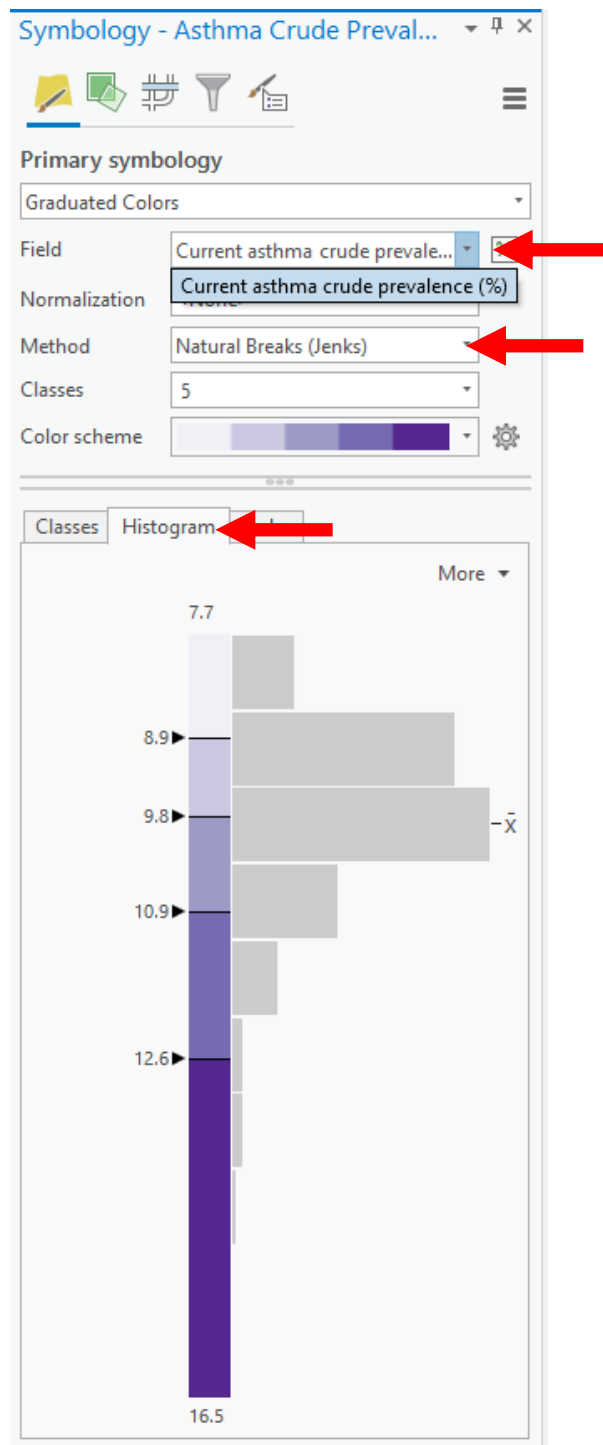
16. You are now ready to symbolize your chosen variables. Right-click on your layer and chose “symbology”.



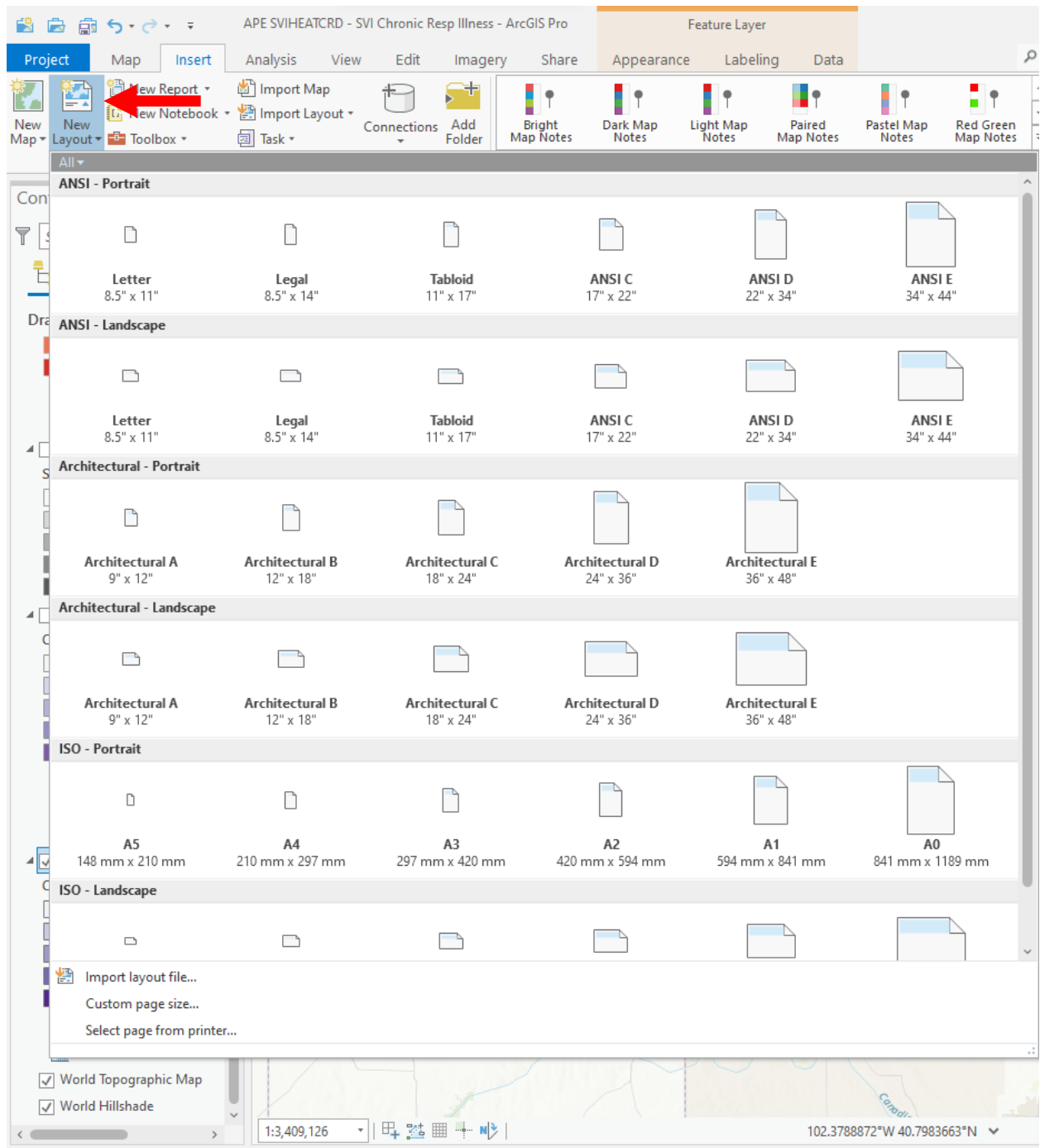
You will now see the screen below. Select your desired color scheme.



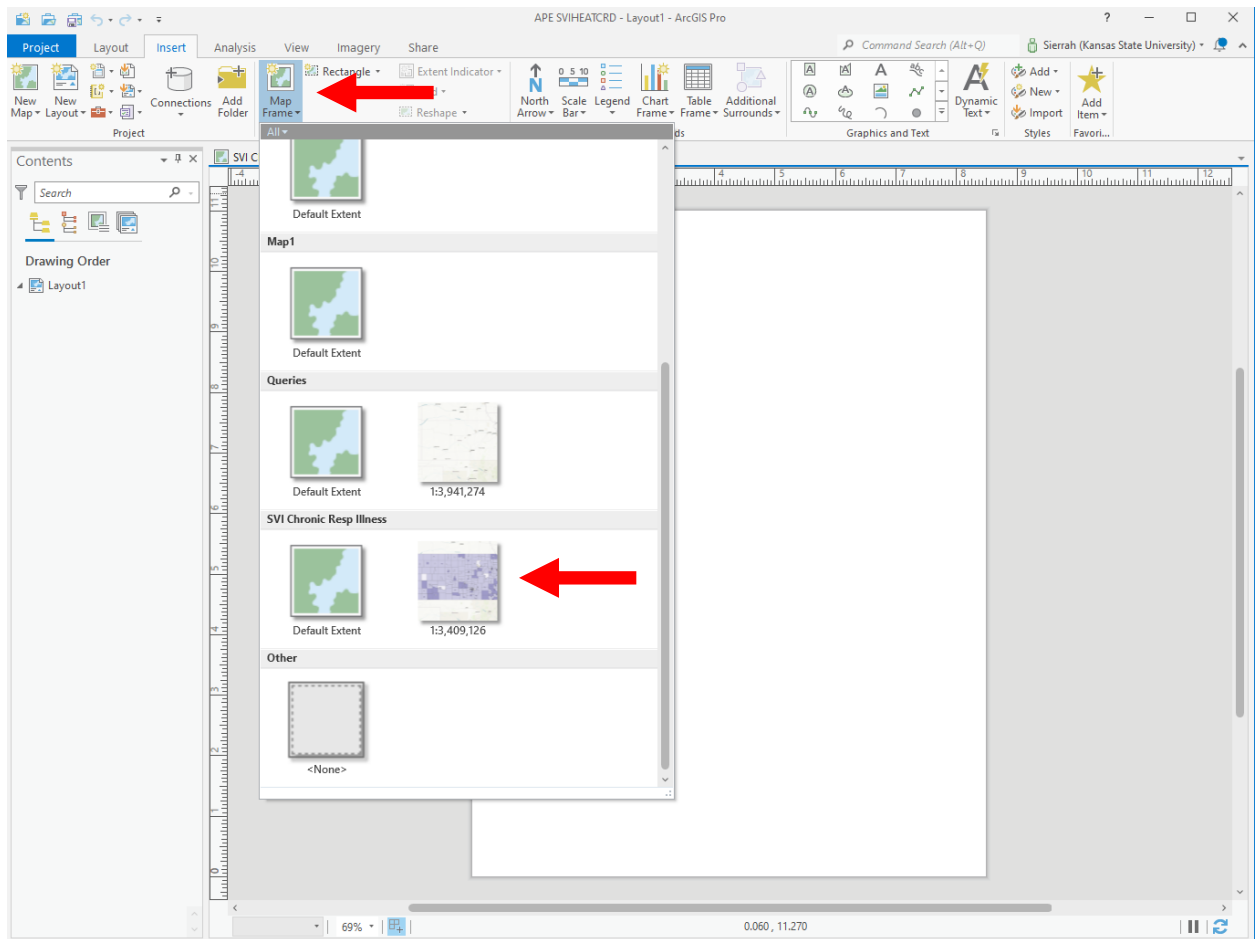
Adjust the “field” by using the drop-down bar to show your desired variable. You should see changes based on your selections appear on the map in real time. Here, you can also edit intervals and their methodology, and view graphs as you wish.



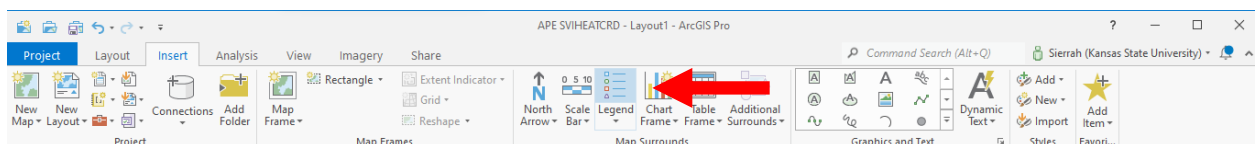
17. Following the finalization of your map's symbology, in order to present the map to your audience select "new layout" under the "insert" tab and select your desired layout.



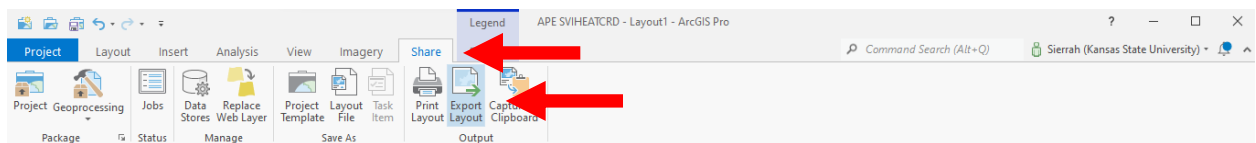
18. Once the new screen appears select “map frame” under the “insert tab” and select your map. This will allow you to add your map to your new layout and crop as desired.

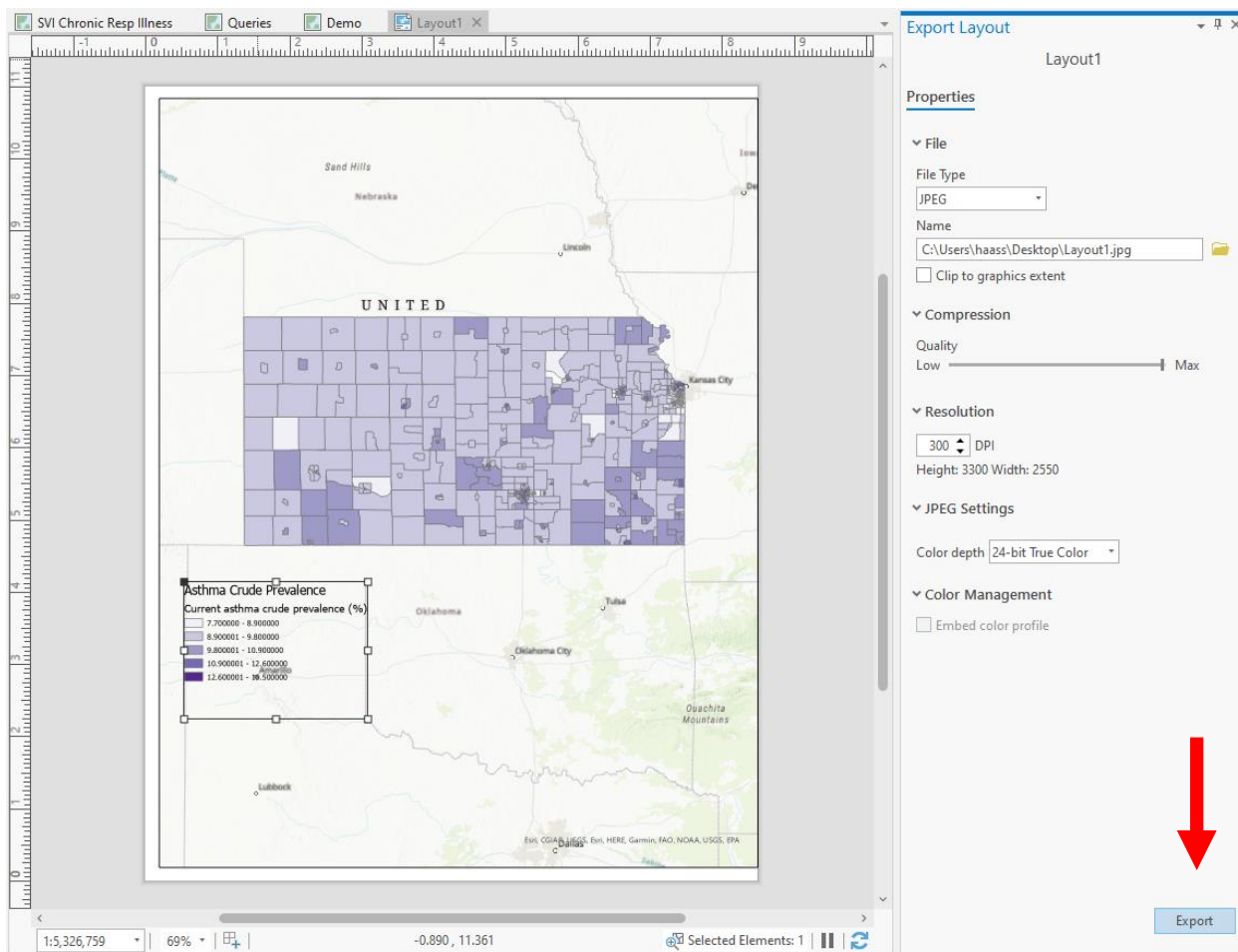


Here you can also add a legend by selecting the “legend” tab and shaping it as desired.



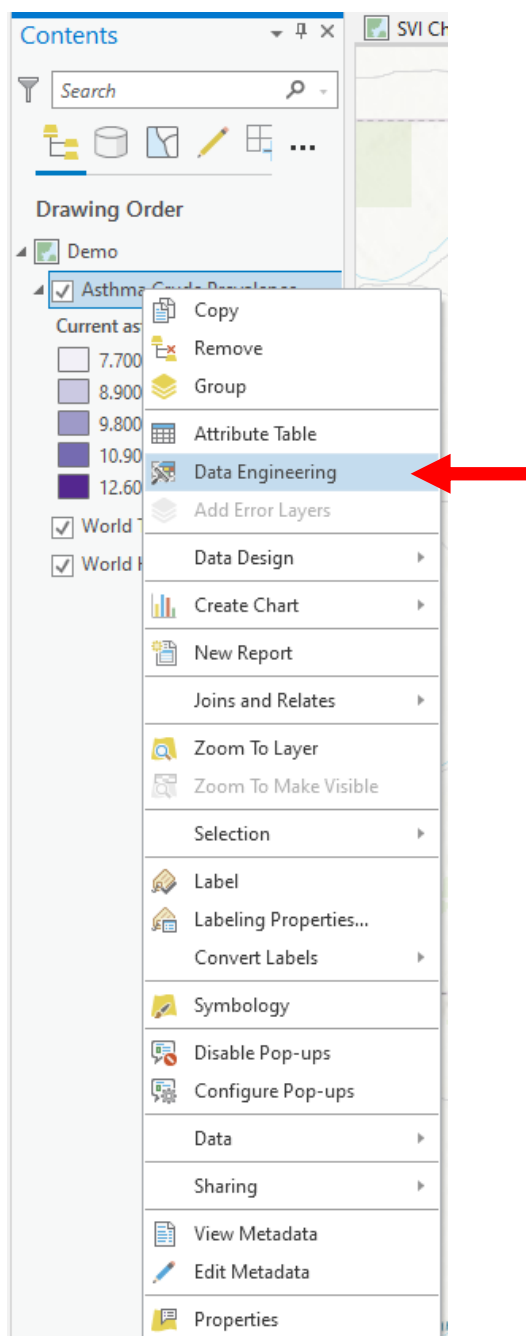
19. After you have your desired layout select “export layout” under the “share” tab, select your desired file type, and click “export”.



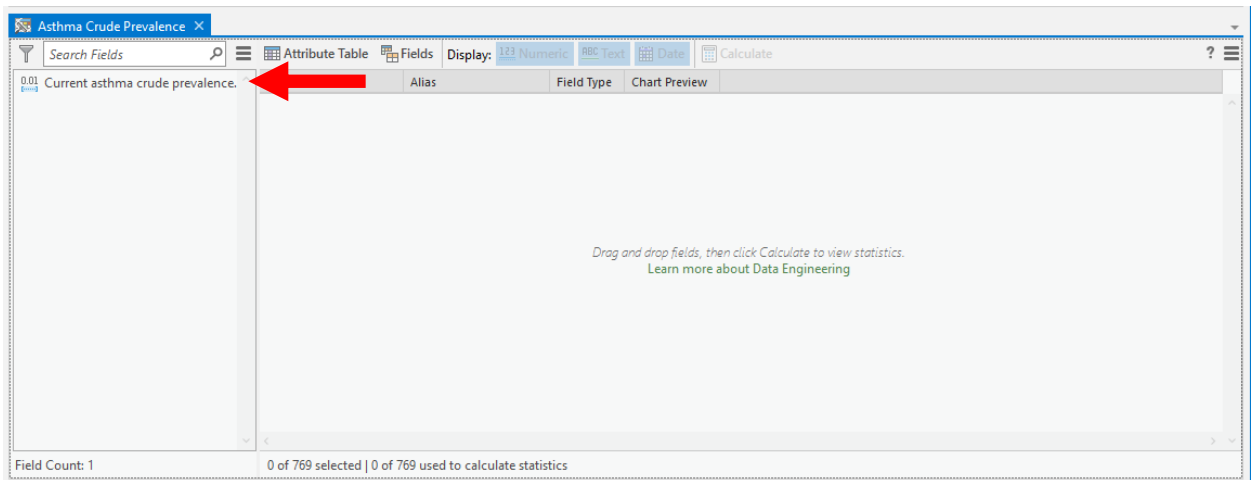


Appendix 6: Steps to Basic Data Exploration

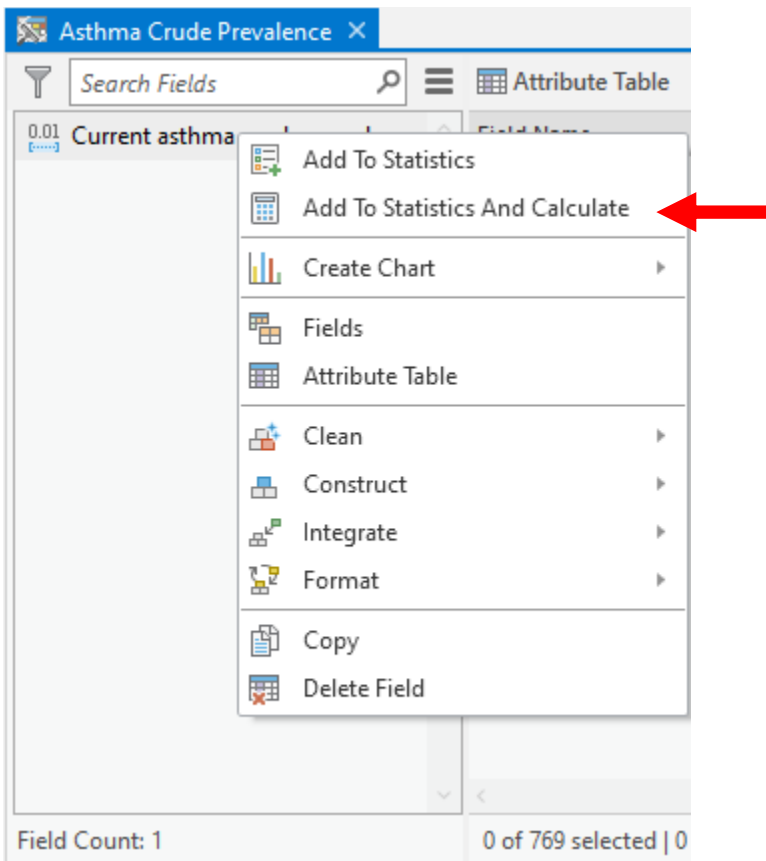
1. Select your layer(s) for analysis. Right-click on one of the layers and select “data engineering”.



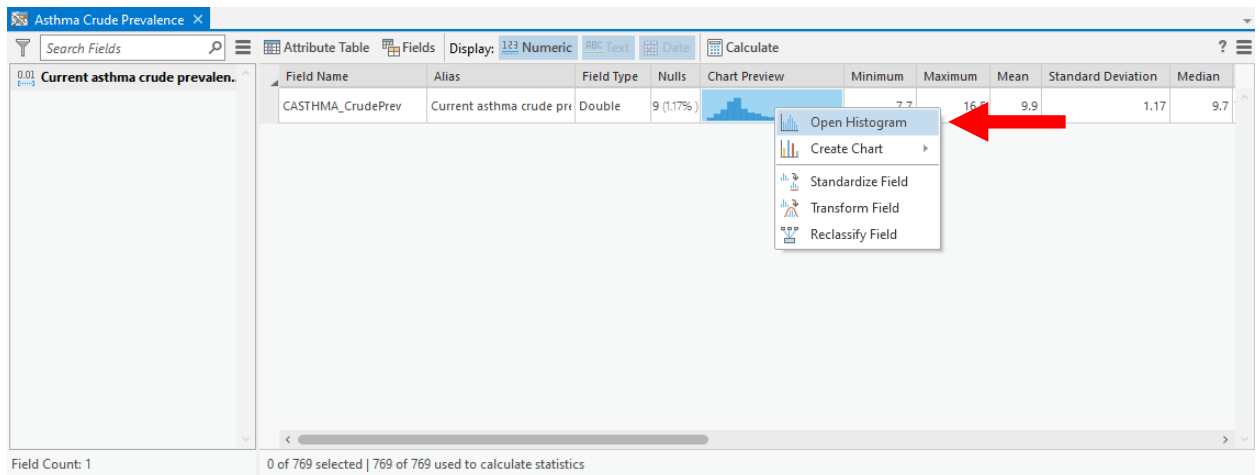
Your selected layers will appear in the “fields” column.



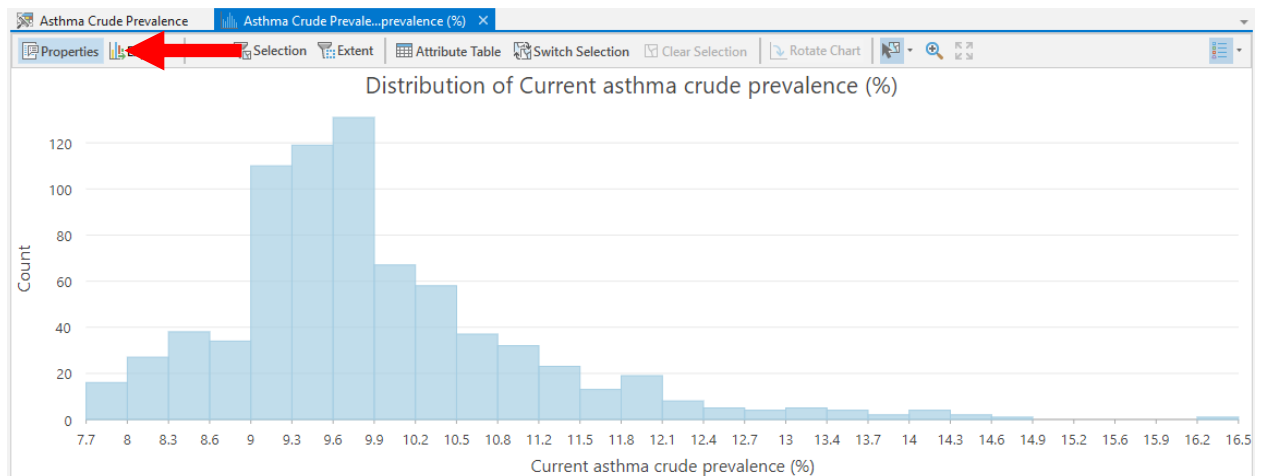
2. Right-click on your chosen layer and select the desired analysis point. Select “add to statistics and calculate” to calculate descriptive statistics.



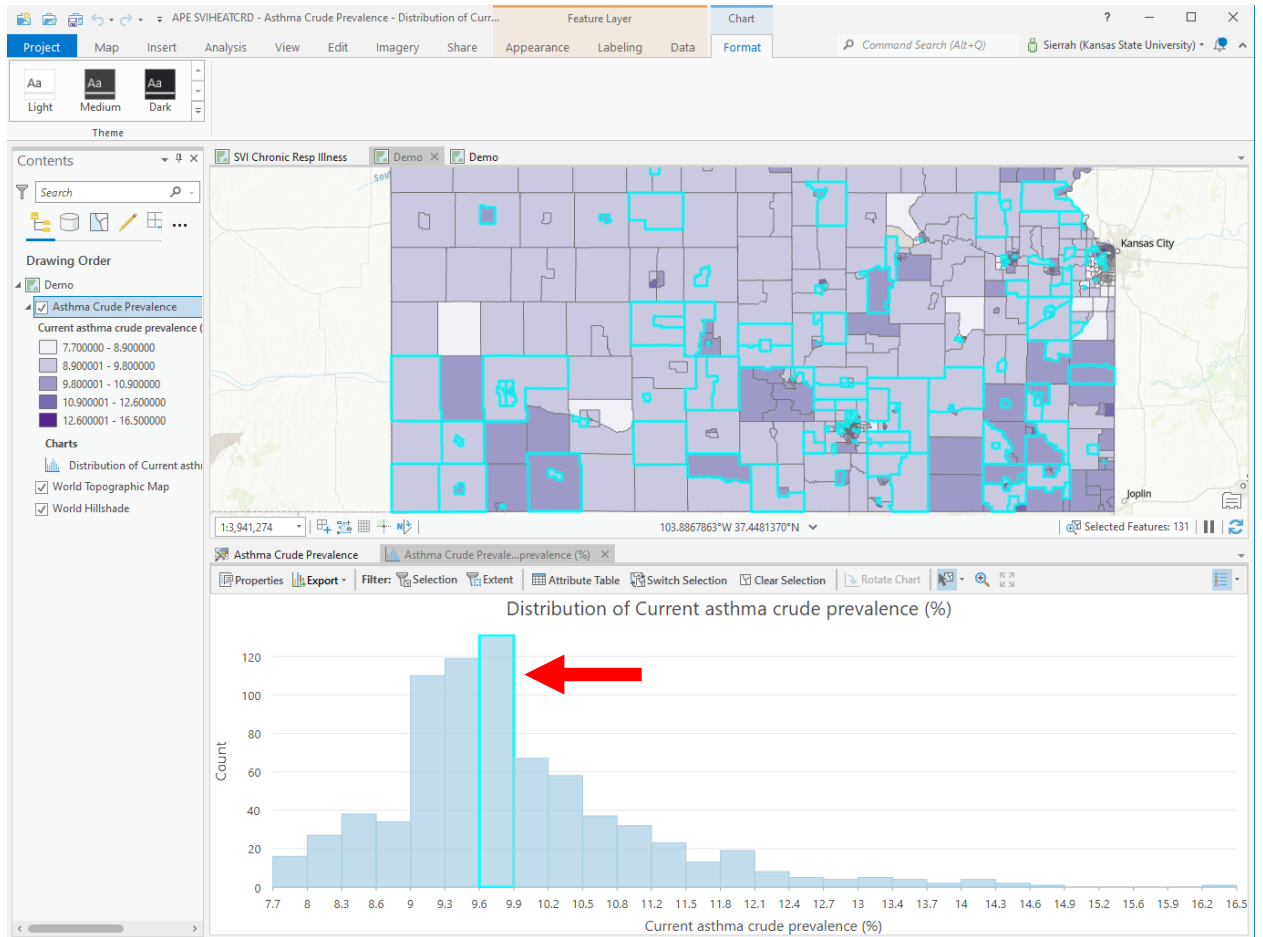
3. At this point, you will see a histogram. Right-click on it and select “open histogram” to view an interactive version of it.



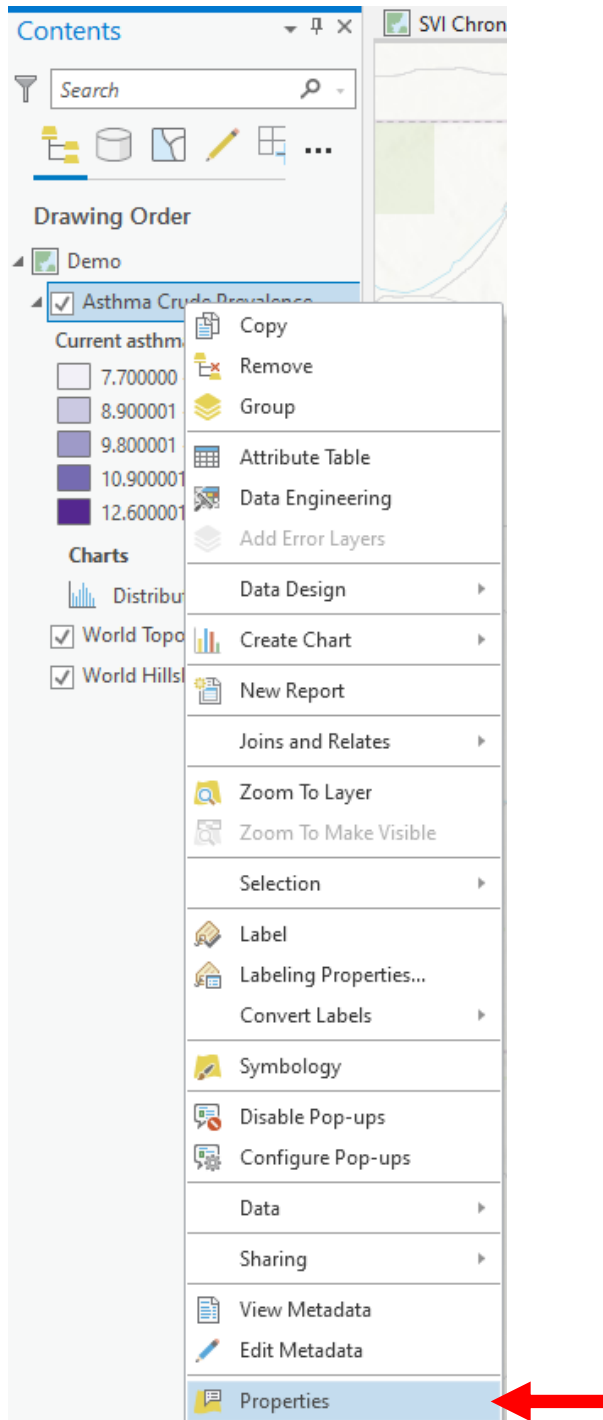
4. Select “properties” in the top left corner of the histogram screen to adjust the properties of the graph.



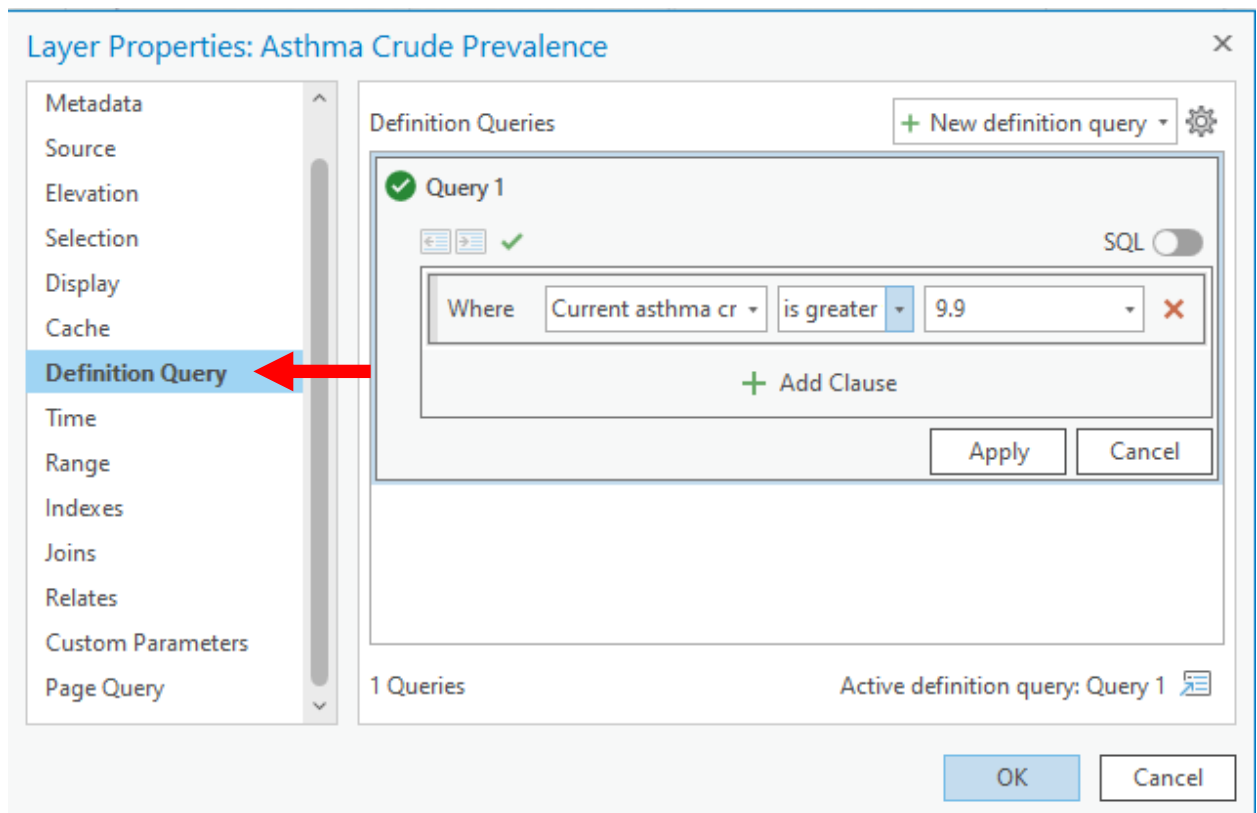
5. After achieving your desired format, select bins to show census tracts that fall within the range shown.



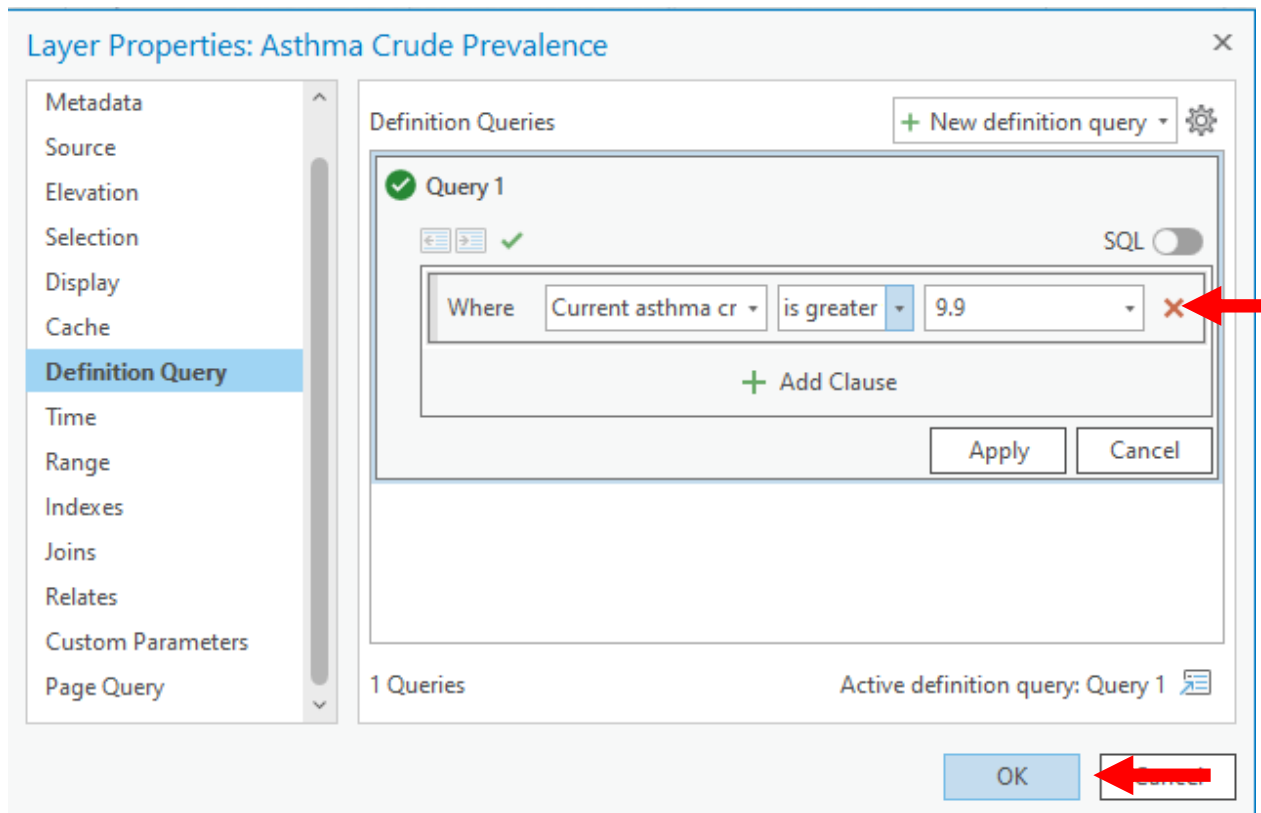
6. Once you have your descriptive statistics, you can use these values to query for additional information. To create a new query, right-click on your chosen layer and select “properties”.



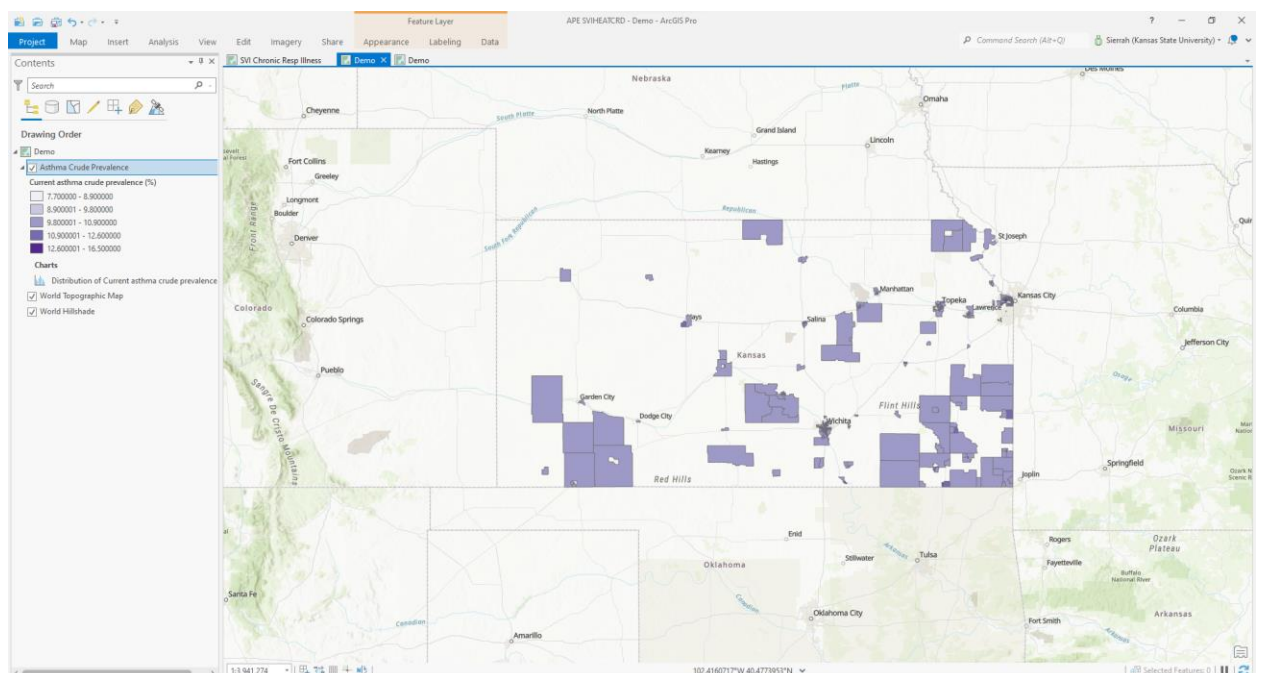
7. From there, select “definition query” from the left-hand panel.



- Then, select a desired field for analysis and define the value you would like the software to look for. Next, click “apply” and then “OK”.



- Results from the query should filter out census tracts displayed on your map to allow for identification based on the values you are seeking. See the example below.

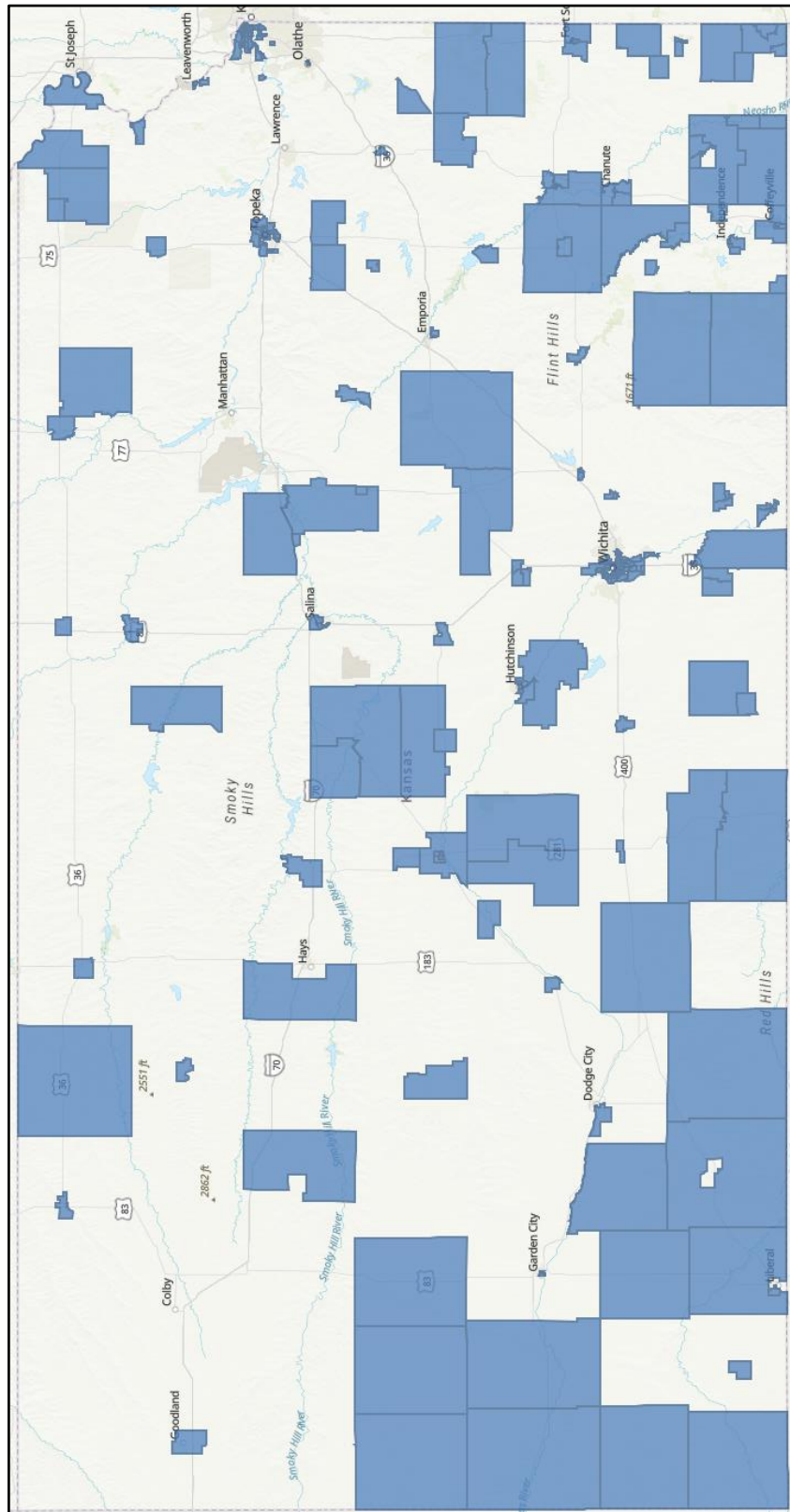


Appendix 7: Query Maps

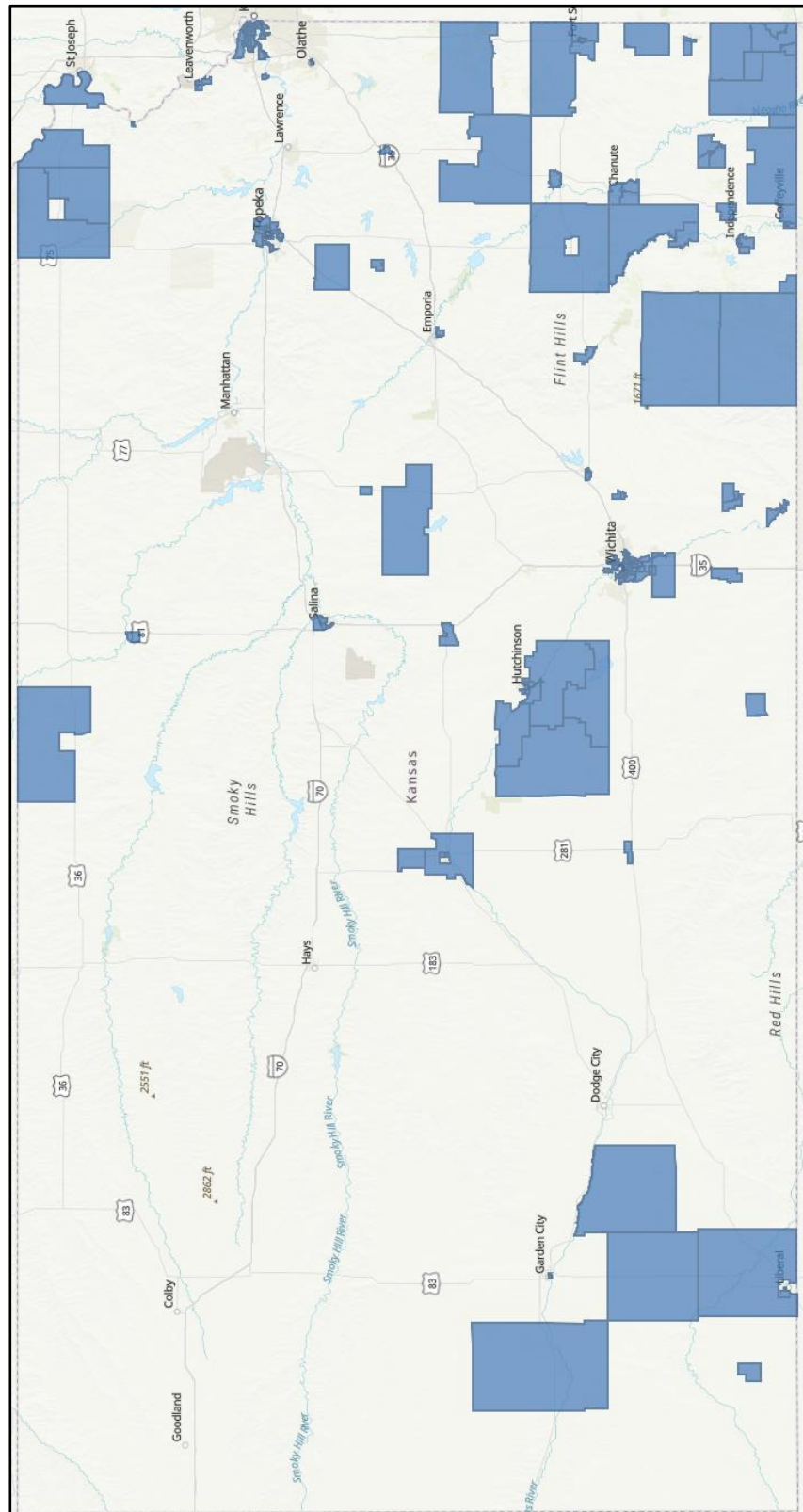
This map highlights the census tracts with a higher-than-average SVI in Kansas.



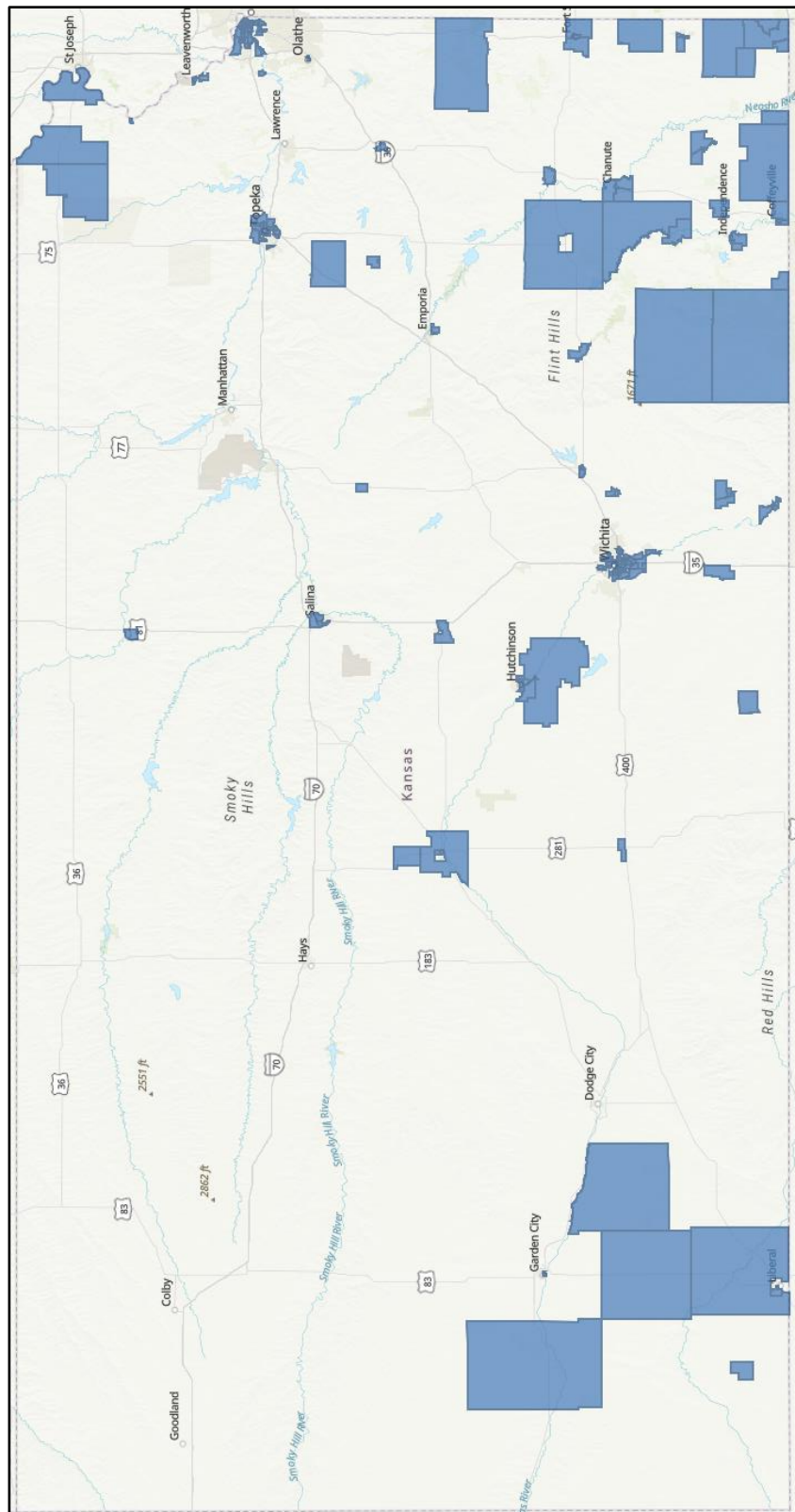
This map highlights census tracts with higher-than-average SVI and COPD crude prevalence in Kansas.



This map highlights census tracts with higher-than-average COPD and asthma crude prevalence in Kansas.



This map highlights census tracts with higher-than-average SVI, COPD crude prevalence, and asthma crude prevalence in Kansas.



Appendix 8: Poster

Extreme Heat, Social Vulnerability, and its Impact on Respiratory Health

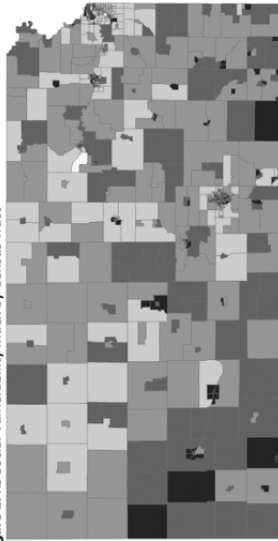
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Social Vulnerability Index

The CDC-created Social Vulnerability Index (SVI) allows for the identification of communities most vulnerable to external stressors including extreme heat. The index takes into account several factors related to socioeconomic status, household characteristics, race, housing type, and transportation access (1).

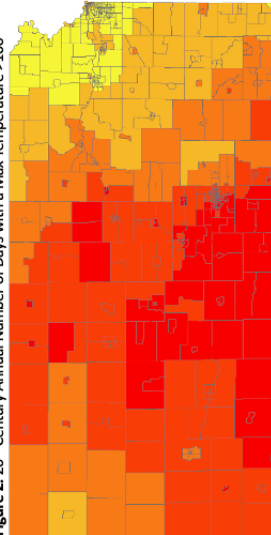
Figure 1. KS Social Vulnerability Index by Census Tract



Extreme Heat

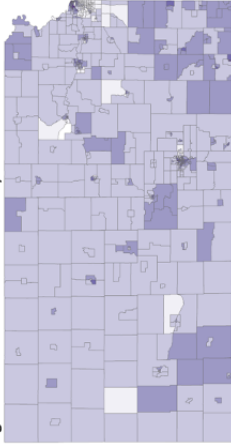
Extreme heat can be linked to poor air quality due to increases in particulate matter levels and ground-level ozone (2). These factors have the potential to decrease lung function and exacerbate chronic respiratory illnesses such as asthma and COPD. In 2016, it was reported that a majority of KS had warmed at least 0.5°F over the 20th century (3,4).

Figure 2. 20th Century Annual Number of Days with a Max Temperature >100



Asthma Crude Prevalence

Figure 3. KS Asthma Crude Prevalence by Census Tract

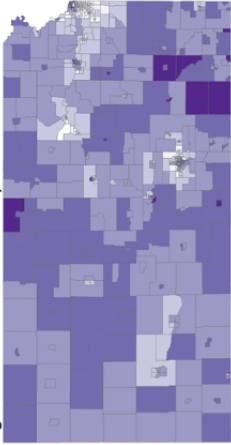


Methods

- Class intervals for figures 2-4 were created using the Jenks natural breaks classification method to assist with map readability.
- Data were obtained from readily-available data resources such as KDHE & CMRA.
- Census tract-level data were visually inspected to identify areas of concern for historically extreme heat rates and COPD or asthma crude prevalence.
- KS SVI and heat data were explored to inform the necessary directory of public health resources related to chronic respiratory conditions.
- Maps were created using ArcGIS Pro 3.0 mapping software.

COPD Crude Prevalence

Figure 4. KS COPD Crude Prevalence by Census Tract



Discussion

- Results indicate that there may be a greater risk of heat-related health issues for residents in southwestern and central KS.
- Social vulnerability is a likely determinant of respiratory health.
- The co-occurrence of COPD and asthma in 49.5% of census tracts demonstrates a need for continued research and health disparity monitoring.

Conclusion

- This preliminary study demonstrates that there is work to be done in creating resources for those most likely to be negatively impacted by extreme heat in KS.

Results

49.5% of census tracts that are considered highly socially vulnerable show a higher crude prevalence of COPD and Asthma. 30% of these census tracts fall within geographic areas with a higher-than-average number of annual days with recorded extreme heat conditions.

In the previous century, southwestern and central KS have demonstrated the highest average number of annual days with a temperature above 100° F.

72.4% of census tracts with higher-than-average asthma crude prevalence rates for KS also demonstrated higher than average COPD crude prevalence.

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Scan here to see references and map scales.



