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December 7th, 2023

Mr. Randy Frazer, City Manager
City of Arkansas City Kansas
118 W. Central Ave.
Arkansas City, KS 67005

RE: Sleeth Addition Health Impact Assessment

Dear Randy;

Enclosed is a printed copy of the completed Health Impact Assessment for the proposed Sleeth Addition Housing Project currently under development in Arkansas City.

As we have previously discussed this report is an unbiased examination of the project reflecting upon the possible health consequences that would impact residents and the community.

I am hopeful that the efforts put forward herein will provide for contemplative discussion and assist in the furtherance of public health outcomes being considered as a matter of course in policy decisions.

If you or your team have any questions about the HIA, or our conclusions please feel free to contact us for further clarification.

Stay well,

A handwritten signature in blue ink, appearing to read "Thomas Langer", is written in a cursive style.

Thomas Langer, MPA
Cowley County Public Health Officer
City-Cowley County Health Department

HEALTH IMPACT ASSESSMENT

HOUSING DEVELOPMENT
IN THE SLEETH ADDITION
ARKANSAS CITY, KANSAS



COMPLETED BY THE
CITY-COWLEY COUNTY
HEALTH DEPARTMENT

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Executive Summary

Health Impact Assessments (HIA) bring potential public health impacts and considerations to the decision-making process before implementation. HIA's use an evidence-based methodology that prioritizes primary and secondary research and data to support claims on potential health impacts. A quality HIA will propose practical recommendations for maintaining positive impacts and mitigating harmful effects.

The City-Cowley County Health Department (CCCHD) supports a HIA Team of members from various backgrounds to support research efforts. The CCCHD's HIA Team utilized the Health Impact Checklist Tool (HI-C) developed by the Kansas Institute of Health to drive research methods. The HI-C tool was adapted when creating the final HIA.

The CCCHD's HIA Team conducted this HIA to present to the City of Arkansas City to inform decision-making regarding a proposal aiming to improve available housing in the area. The details within the HIA are organized by research and information available to the HIA Team at the time of publication on November 30, 2023.

Disclaimer: The City of Arkansas City ordered a Phase One Environmental Assessment conducted by the Kansas Department of Health and Environment (KDHE). The findings from the Phase One Environmental Assessment were not available during the development of the HIA. Therefore, health impacts regarding the findings associated with that assessment are unknown at the time of publication.

The City-Cowley County Health Department received support from Blue Cross and Blue Shield of Kansas (BCBSKS) for developing this report under the "Pathways to a Healthy Kansas Initiative".

Health Impact Checklist

Summary Page

Proposal Name
Housing Development in the Sleeth Neighborhood – Arkansas City

Key Points of Proposal
The proposal from Sampayo Capital Group Rural Vision Development aims to place up to forty-eight manufactured homes on a vacant lot in the Sleeth Addition to improve housing availability within the City of Arkansas City.

Impacted Social, Economic and Environmental Conditions
<p>Housing Instability (HI): If manufactured homes are offered at an affordable price, they have the potential to improve housing stability for individuals. However, concerns still persist regarding limited access to amenities in the area.</p> <p>Environmental Conditions (EC): The development site's location near a flood-prone area and lack of a drainage plan present environmental risk concerns.</p> <p>Safety- Storm Shelter (SS): The proposed development's lack of a storm shelter, coupled with an influx of 96-116 residents, heightens the risk in emergencies.</p> <p>Health & Health Care- Splash Pad (SP): While a splash pad could offer physical activity, social interactions, and cooling effects, it also increases the risk of waterborne illness.</p>

Potential Health Impacts
<p>HI: Improved physical and mental health.</p> <p>EC: Exposure to post-flood pollutants and mold can cause health problems ranging from respiratory issues to infections, while stagnant waters heighten mosquito-borne disease risks and ongoing floods may lead to psychological stress.</p> <p>SS: Increased risk of unintentional injury and death</p> <p>SP: Increased exposure to waterborne illnesses</p>

Impacted Population(s)
<p>Although the specific population that will move into these housing options is yet to be determined, those more likely to reside in manufactured housing include:</p> <ul style="list-style-type: none"> - Children - Residents with Limited English Proficiencies - Older adults

Recommendations
<p>HI: Select manufactured homes with accessibility features.</p> <p>EC: Install best-practice drainage systems.</p> <p>SS: Include storm shelter plans in proposal.</p> <p>SP: Maintain designated recreation space and amend proposal to include a water-free environment.</p>

Entity Completing the HI-C	Entity Receiving the HI-C	Completion Date
City-Cowley County Health Dept.	City of Arkansas City	11/30/2023

Section I. General Information

1. Name of proposal:

Housing Development in the Sleeth Addition- Arkansas City

2. Provide a short summary of the key points of the proposal, including expected outcomes if specified in the proposal.

Proposal Overview
The City of Arkansas City is working with a developer, Sampayo Capital Group, to place forty to forty-eight manufactured homes on a vacant lot in the Sleeth Addition. The proposal aims to improve the availability of quality, affordable housing units, an issue identified and researched by the City of Arkansas City for more than ten years. Sampayo Capital Group intends to source the manufactured homes locally from Champion Homes Center.

Reasons for Assessment
Local interest in the project among residents and a special request for feedback from the Cowley County Public Health Officer led the City-Cowley County Health Department to prepare this health impact study for the City of Arkansas City as they consider the housing proposal from Sampayo Capital Group.

3. The following social, economic and environmental conditions (determinants of health) may be the most impacted by the proposal.

Social, Economic and Environmental Conditions		
Economic Stability	Neighborhood & Physical Environment	Education
<input type="checkbox"/> Employment	<input type="checkbox"/> Housing Quality	<input type="checkbox"/> Early Childhood Education and Development
<input type="checkbox"/> Income	<input type="checkbox"/> Transportation	<input type="checkbox"/> High School Graduation
<input checked="" type="checkbox"/> Housing Instability/ Homelessness	<input checked="" type="checkbox"/> Environmental Conditions (e.g., water, air and soil quality)	<input type="checkbox"/> Higher Education
<input type="checkbox"/> Food Insecurity	<input type="checkbox"/> Access to Healthy Food	<input type="checkbox"/> Language
<input type="checkbox"/> Poverty	<input checked="" type="checkbox"/> Safety: Storm Shelter	<input type="checkbox"/> Literacy
<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Other: Accessibility	<input type="checkbox"/> Other:
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:
Community and Social Context	Health and Health Care	<i>Note: The number of social, economic or environmental conditions examined could depend on available resources, stakeholder interest and timeline. After examining three, additional conditions may be examined further.</i>
<input type="checkbox"/> Civic Participation	<input type="checkbox"/> Health Coverage	
<input type="checkbox"/> Discrimination	<input type="checkbox"/> Provider Availability	
<input type="checkbox"/> Toxic Stress	<input type="checkbox"/> Access to Health Care	
<input type="checkbox"/> Social Isolation	<input type="checkbox"/> Access to Behavioral Health Services	
<input type="checkbox"/> Incarceration	<input type="checkbox"/> Quality of Care	
<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Other: Splash Pad	
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	

Section II. Description of Impacts

4. These partners assisted in the research process.

Specific Partner(s)	Partnership Contribution(s)
City of Arkansas City	The City Manager and appointed staff provided requested documentation and clarification on specific items of interest.

5. The proposal could impact the conditions identified in Question 3 and result in associated health impacts for the community.

Social, Economic or Environmental Condition	Impact of the Proposal on Condition	Impact of the Condition on Health	Overall Impact on Health
Housing Instability / Homelessness	Placing forty to forty-eight manufactured homes on a vacant lot in the Sleeth Addition within Arkansas City, Kansas, can enhance housing stability in the area. Manufactured homes, recognized for their affordability, provide a cost-effective alternative to traditional housing, especially for those on a tight budget. ¹ Individuals and families either at risk of homelessness or currently without stable housing might secure a reliable residence. ²	Increasing housing stability could improve mental and physical health, reducing illnesses from exposure and alleviating the stresses of housing insecurity. ³ Individuals with safe homes free from hazards experience better physical and mental health than those with substandard housing. ⁴ Economically, affordable housing could allow residents to prioritize necessities like healthcare and nutrition. ⁴ However, additional residents could impact traffic, accidents, and air pollution risk. Furthermore, limited access to amenities in this area, such as parks, healthcare, and recreational areas, could create barriers to a healthier lifestyle.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear
Environmental Conditions	The proposed development site is located near a special flood hazard area, zone AE, and is designated prone to flooding. ⁵	Exposure to pollutants and debris collected by floodwaters could pose a threat to future residents. Post-flooding, buildings and homes can become susceptible to mold growth if not adequately dried. ⁹ Mold exposure can lead to	<input type="checkbox"/> Positive <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear

Social, Economic or Environmental Condition	Impact of the Proposal on Condition	Impact of the Condition on Health	Overall Impact on Health
	<p>Similar sites have code requirements for adequate drainage to minimize the impact of surface floodwater collection.⁶ Surface floodwaters and stagnant pools carry hazardous contaminants⁷ and provide breeding grounds for mosquitoes and other pests.⁸ The proposal would benefit from including methods to facilitate drainage and prevent pools of stagnant water on the development site.</p>	<p>respiratory issues, allergic reactions, and worsening of asthma conditions.¹⁰ Physical injury can result from larger debris or hidden hazards within the floodwaters, and the water contains contaminants and pollutants that can cause infections and other adverse conditions. People exposed to these contaminants can suffer from various health issues, including gastrointestinal illnesses, skin infections, respiratory problems, and other infections.¹¹ Stagnant pools of water are breeding grounds for mosquitoes. Mosquitoes are known carriers of viruses such as West Nile and Zika.⁸</p> <p>Living in an area prone to flooding can introduce chronic stress, anxiety, and other mental health concerns. The fear of potential flooding, especially without proper safety and drainage measures, can impact residents' mental well-being.¹²</p>	
<p>Safety (Shelter)</p>	<p>The proposal aims to place 40-48 manufactured homes on a vacant lot within the Sleeth Addition. A population increase will create additional traffic during evacuation due to a storm event. The proposal could benefit from including plans to place storm shelters on the development site to</p>	<p>The Sleeth Addition does not have a public storm shelter and could see a population increase of approximately 96-116 people if the proposal is adopted¹⁴. The risk of unintentional injury during a storm event will be increased for displaced residents who will be forced to travel 1.98 miles to the nearest Federal Emergency Management Agency (FEMA) rated storm shelter at Roosevelt Elementary School¹⁵. Head injuries, lacerations, being</p>	<p><input type="checkbox"/> Positive <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear</p>

Social, Economic or Environmental Condition	Impact of the Proposal on Condition	Impact of the Condition on Health	Overall Impact on Health
	increase access within the neighborhood.	struck by objects, becoming airborne at high speeds, and even death are common side effects of storm events ¹⁶ . The National Weather Service (NWS) states that 54% of housing fatalities during a tornado occur in mobile/manufactured homes despite only 6% of United States homes being structured that way ¹⁷ .	
Safety (Vehicular Access)	The Sleeth Addition is accessible only by two narrow, two-lane roads: Mill Road and F Street. Mill Road is a paved two-lane road that extends from the Highway 77 bypass, while F Street is a cobblestone road that extends south from Madison Avenue. These narrow roadways do not allow for high traffic volumes, and active rail lines bisect both roads. These factors limit traffic flow into and out of the Sleeth Addition.	Constricted traffic flow and capabilities reduce the availability of emergency services. Overburdened/under-engineered roadways rapidly deteriorate under strenuous conditions, worsening roadway reliability. Constricted traffic flow and capabilities reduce the availability of emergency services. Overburdened/under-engineered roadways rapidly deteriorate under strenuous conditions, worsening roadway reliability. Limited road access and increased traffic during evacuation events could worsen health and safety outcomes for residents who cannot evacuate quickly and effectively.	<input type="checkbox"/> Positive <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear
Other: Splash Pad	The Sleeth Addition has one park available for recreational activities. The proposal supports the inclusion of a second recreation space with the intent to install a splash pad. Including a second recreation space in the Sleeth Addition will enhance the neighborhood by	Splash pads in manufactured housing communities could be crucial hubs for physical and mental well-being. They could promote cardiovascular health through physical activity, elevate mood, and foster social interaction, all while ensuring a safer water play environment for children compared to deeper pools. Moreover, the cooling effects during summer months	

Social, Economic or Environmental Condition	Impact of the Proposal on Condition	Impact of the Condition on Health	Overall Impact on Health
	<p>creating new opportunities for outdoor enrichment. The addition of the splash pad may serve as an attraction for families with children to move into the area.</p>	<p>prevent heat-related ailments.¹⁸ However, splash pads also pose the risk of recreational water illnesses (RWIs) that impact the health of participants¹⁹. Some acute gastrointestinal illnesses (diarrhea and/or vomiting), skin illnesses (rashes), and acute respiratory illnesses (coughing and/or congestion) have been linked to water transmission¹⁹. The Kansas Department of Health and Environment (KDHE) still requires select waterborne illnesses (e.g., Shigellosis, etc.) to be reported at diagnosis to launch an official investigation into their origin and scope²⁰. System construction, maintenance, and participants' behaviors influence the impact of waterborne illnesses²¹.</p>	

6. Based on the potential impact of the proposal on the conditions selected in Question 3, we identified populations who could be impacted and how the proposal might affect their health.

Social, Economic or Environmental Condition	Impacted Population	Impact on Health	Overall Impact on Health
<p>Housing Instability and Homelessness</p>	<p>Future residents (e.g., low-income, older adults)</p>	<p>Manufactured homes are constructed under the US Department of Housing and Urban Development's (HUD) code, the only national building code regulating, monitoring, and approving construction before transport and sale²². HUD code guarantees that manufactured homes are constructed in controlled environments free from elements²³. Certification labels ensure the house was constructed according to the</p>	<p><input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear</p>

Social, Economic or Environmental Condition	Impacted Population	Impact on Health	Overall Impact on Health
		<p>HUD code²³. Constructing new houses that comply with code regulations and guidance lowers the incidence of chronic conditions and reduces exposure to environments that cause or exacerbate such conditions²⁴. Populations more likely to reside in manufactured housing include:</p> <p>Low-income: Residing in a modern manufactured home offers a stable environment that reduces stress and anxiety. However, the extent of these benefits depends on the affordability and quality of the housing. They might not be fully realized based on the current location of the planned development²⁴.</p> <p>Older adults: Safe housing for older adults significantly impacts their overall well-being, reducing health risks and enhancing their mental state²⁵. When features such as non-slip floors, handrails, and adequate lighting are provided in the homes of older adults, there is a significant reduction in the risk of falls²⁵. Given that falls are a primary source of injury among seniors, these specific accommodations are essential for ensuring their safety and overall health²⁶.</p> <p>Homeownership is associated with better health, fewer illnesses, and lower rates of depression and anxiety. Equity in a home can be used to build savings and generational wealth and to secure loans to start a business²⁷.</p>	
Environmental Conditions (Flooding and drainage)	Future residents (e.g., low-income, older adults)	Floodwater collecting in poorly drained areas poses threats through the accumulation of harmful contaminants and dangerous debris, particularly in poorly drained areas ²⁸ . Standing floodwater ponds pose an attractive place to play for young children and adolescents, putting them at	<input type="checkbox"/> Positive <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear

Social, Economic or Environmental Condition	Impacted Population	Impact on Health	Overall Impact on Health
		<p>higher risk of exposure to contaminants and dangerous debris²⁸. Additionally, standing floodwaters in an insufficiently drained area can hamper transportation and cause significant negative mental health impacts²⁹.</p> <p>Flooding also provides ample breeding grounds for mosquitos if surface ponding is not adequately drained and is linked to increased mosquito-borne illnesses³⁰.</p> <p>Significant flooding can affect housing conditions. The impacts of mold growth, exposure, and water damage have been linked to harmful short and long-term health impacts³¹.</p>	
Safety (Shelter)	Future residents (children, older adults, people with disabilities, non-English speakers, low-income households, etc.).	<p>Mobile and manufactured housing residents are the most vulnerable to tornadoes³². The 2019 Beauregard-Smith Station EF4 tornado killed 23 individuals- 19 of whom lived in a manufactured home³³.</p> <p>Retroactive data from the storm event shows that weather predictions and warnings were accurate and timely, leading up to the destruction by the tornado³³. A lack of designated storm shelters near mobile and manufactured home parks and residents’ struggles to exercise a sheltering plan that can be enacted in 15 minutes or less leads individuals to shelter within their mobile or manufactured homes³².</p> <p>Sheltering in a mobile or manufactured home makes the occupants susceptible to injury and death from strong winds and impacts of flying debris³². Implementing a designated storm shelter would give residents an option to turn to within minutes of a storm event, reducing the incidence of unintentional injury. The following sub-population might be more negatively impacted:</p>	<input type="checkbox"/> Positive <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear

Social, Economic or Environmental Condition	Impacted Population	Impact on Health	Overall Impact on Health
		<p>Older Adults: Older adults may have limited mobility or health issues that make it difficult for them to seek shelter quickly or evacuate if necessary.</p> <p>Children: Young children, especially those without adult supervision, might not understand the dangers or know how to respond.</p> <p>People with Disabilities: Depending on the nature of the disability, some individuals might have difficulties receiving, understanding, or acting upon emergency alerts.</p> <p>Non-English Speakers: Language barriers can prevent some individuals from understanding emergency warnings or instructions.</p> <p>Low-Income Households: Economic constraints might limit preparedness measures, such as having a safe place to go or resources for evacuation.</p> <p>People without Transportation: Those without vehicles or other means of transportation might struggle to evacuate or find shelter.</p> <p>People with Chronic Illnesses or Medical Dependencies: Individuals dependent on medical equipment or regular medication might face additional challenges.</p>	
Safety (Roadway Access)	Sleeth Addition Residents	Unreliable avenues of transportation significantly worsen living and emergency conditions. Deteriorating roadways put increased financial burdens on families through increased vehicle maintenance costs. Deteriorating and overly constrictive roadways prevent emergency service vehicles from reaching active scenes in time, worsening health outcomes in the short term and eroding trust in emergency services in the long term. Difficulty traversing these roadways could serve as an additional deterrent for growth in the	<input type="checkbox"/> Positive <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear

Social, Economic or Environmental Condition	Impacted Population	Impact on Health	Overall Impact on Health
		affected area, stifling necessary and recommended improvements that will impact residents' health and living conditions.	
Splash pad	Children < 5	<p>Splash pads provide safe spaces for recreation and play, enhancing development in young children and preventing activity-related chronic diseases such as diabetes³⁴. However, their use of water, maintenance needs, and the behaviors of participants make them a vulnerable site for medically attended acute gastroenteritis (MAAGE). Over ten million outpatient visits and one million hospitalizations are attributed to MAAGE annually in the United States³⁵.</p> <p>Viral pathogens, including norovirus, increase the likelihood of a MAAGE incident³⁵. Norovirus and other viral and bacterial pathogens are known as enteropathogens acquired through the fecal-oral route from person to person or through contaminated food and water³⁵. Recreational water activities create a transmission pathway for such illnesses³⁶. A population-based surveillance study over two years found that children under five were disproportionately impacted by MAAGE³⁵. Furthermore, children under age five are more likely to ingest recreational water than adults and, because of improper toileting and hygiene skills, are more likely to contaminate the waters³⁶.</p>	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Mixed <input type="checkbox"/> None <input type="checkbox"/> Unclear

Section III. Recommendations

7. **Based on the results of this Health Impact Checklist, we provided suggestions that can help to maximize potential positive health impacts and/or mitigate potential negative health impacts of the proposal.**

Recommendation(s)
Housing Instability: We recommend that Sampayo Capital Group select manufactured homes with accessibility features (wider hallways, doorways, walk-in showers, etc.) to appeal to a broader audience base and serve as a platform to deliver needed medical aid for emergency services and chronic health conditions ²⁴ .
Environmental Conditions: We recommend that Sampayo Capital Group use native vegetation and landscaping techniques, such as rain gardens and bioswales, to absorb excess water and reduce surface runoff. These methods enhance drainage and provide aesthetic value to the development.
Environmental Conditions: Given that stagnant water can be breeding grounds for mosquitos and other pests, we recommend an integrated pest management plan to mitigate potential health risks associated with these pests.
Storm Shelter: We recommend that Sampayo Capital Group amend its proposal to include the placement of appropriate storm shelters to improve accessibility during a storm event and reduce the potential for unintentional injury.
Vehicle Accessibility: We recommend that the City of Arkansas City, in cooperation with Emergency management, work with ADM Milling to produce an emergency-use agreement for their private roadway that circumvents the rail crossing on Mill Road.
Vehicle Accessibility: We recommend that the City of Arkansas City consider projects to rehabilitate, improve, and expand the roadway access into the Sleeth Addition to compensate for increased traffic volumes.
Splash Pad: We recommend that Sampayo Capital Group continue with plans to develop a recreation space to promote positive health behaviors, including physical activity and social engagement. However, installing a playground rather than a splash pad would decrease the potential for gastrointestinal illness and still support various physical activities ³⁷ .
Splash Pad: We recommend that Sampayo Capital Group, upon the decision to install a splash pad, install a freshwater system splash pad to avoid the negative health impacts of recirculating contaminated water in a closed loop system.

Section IV: References & Sources

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