EXHIBIT C

ISSUE STATEMENT: PUBLIC HEARING AND RECOMMENDATION TO THE CITY COUNCIL CONCERNING THE AMENDMENT OF THE CITY'S ZONING REGULATIONS AS THEY RELATE TO PHYSICAL DEVELOPMENT THAT IMPACTS SINKHOLES

DATE: MAY 2, 2022

SUBMITTED BY: PLANNING AND DEVELOPMENT DEPARTMENT

PRESENTED BY: PLANNING AND DEVELOPMENT DEPARTMENT

Background

The City of Nixa is situated within an area characterized by geologic features commonly referred to as Karst topography. The most well-known karst feature is the sinkhole, which is a natural depression in the surface topography caused by the removal of soil or bedrock by water. Sinkholes become a matter of public interest because the depressions typically hold stormwater runoff, which can be a flood hazard, and they can also provide a more direct conduit to groundwater sources, which increases susceptibility to contamination.

The City of Nixa has regulated development within and around sinkholes for many years. The regulations focus on preventing flood hazards and promoting water quality. In the course of administrating these regulations, it was discovered that one of the flood mitigation provisions was more restrictive that was necessary to promote the public interest. The amendments to the City's sinkhole regulations that accompany this memorandum were crafted in response to that discovery.

Analysis

The proposed amendments to the sinkhole regulations are purposed to clarify the regulations as well as to ensure that the regulations serve the public interests at stake without imposing requirements for which it can be demonstrated that the costs of such regulations outweigh the benefits derived by the community.

To this end, staff has is proposing to modify the requirements concerning how much additional runoff can be added to a sinkhole that is shared by multiple property owners. Presently, development on a property for which there is a sinkhole that is partially located on a neighboring property, the developer has the following options:

1. Obtain a drainage easement from the neighboring property owner to contain the post-development sinkhole flooding area.
2. In the absence of an easement, they may only cause a rise in the water surface elevation of the sinkhole by no more than 1.2 inches.

3. In the absence of an easement, they may study the sinkhole's subsurface outflow rate in order to demonstrate that additional runoff may be added that will not cause more than the afforded 1.2 inches of rise.
4. In the absence of an easement, they may excavate from within the sinkhole rim in order to create more storage capacity within the sinkhole so that additional runoff may be added that will not cause more than the afforded 1.2 inches of rise.

In discussing these requirements with stormwater professionals, it became apparent that the restriction to only causing a rise of 1.2 inches was an arbitrary limit that imposed great difficulty on the developing party without providing proportionate protections to the community.

The amendment proposes to allow the water surface elevation within a sinkhole to rise as much as 1 foot (a rise limit more customarily applied in scenarios pertinent to flood prone areas) and that each property within the sinkhole's drainage basin may account for their proportionate share of that afforded 1 foot of rise based on their proportion of the drainage basin's overall area. Additionally, the amendment requires the use of a more impactful storm event in modeling the impacts of runoff on the sinkhole in order to ensure flood hazard risk is mitigated appropriately.

The result is that the regulations will remain sufficiently protective against flood and water quality threats will also remaining conducive to the profitable and productive use of land.

Recommendation

Staff recommends the approval of this amendment.