

CITY OF SANTA ROSA  
CITY COUNCIL

TO: MAYOR AND CITY COUNCIL  
FROM: FLANNERY BANKS, STORM WATER & CREEKS ENGINEER,  
WATER DEPARTMENT  
JESSE OSWALD, CHIEF BUILDING OFFICIAL, PLANNING AND  
ECONOMIC DEVELOPMENT  
SUBJECT: SANTA ROSA CREEK FLOOD STUDY AND FEMA MAP  
REVISION

AGENDA ACTION: STUDY SESSION

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RECOMMENDATION

It is recommended by Santa Rosa Water and the Planning and Economic Development Department that Council hold a Study Session to receive information, ask questions, discuss, and provide feedback to staff regarding the Santa Rosa Creek Flood Study and Federal Emergency Management Agency (FEMA) map revision.

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EXECUTIVE SUMMARY

The City is in the process of engaging with the Federal Emergency Management Agency (FEMA) to update flood hazard maps for Santa Rosa Creek and its key tributaries. The Santa Rosa Creek Flood Study and FEMA Map Revision project will update hydrologic and hydraulic models to calculate inundation extents due to a 100-year flood event and will provide this data to FEMA so that FEMA can generate new Flood Insurance Rate Maps and update Flood Insurance Studies for the study area. The City will evaluate the implications of map updates on local property owners, lead stakeholder engagement efforts, communicate findings, and assist the public in understanding the National Flood Insurance Program requirements and options.

BACKGROUND

Santa Rosa Creek and its tributaries have experienced flooding during major storm events in recent history. Floods in this area are the result of heavy rains in low-lying areas with limited drainage routes. Creeks are prone to flooding in 100-year storm events which have a 1% chance of occurrence in a given year. Even smaller, more frequent storm events have led to flooding and erosion in Santa Rosa Creek. Floods can be powerful enough to move large objects swiftly into other objects, cause damage to buildings and infrastructure, and weaken soil and building foundations. Secondary

impacts of flooding, including saturated soils and erosion from flooding events, can cause trees to weaken and collapse, increasing the potential for property damage and loss of life. All of these impacts make infrastructure more susceptible to damage or collapse.

FEMA's current Flood Insurance Rate Maps either do not have up-to-date information on inundation extents for a 100-year flood event or have not mapped the 100-year flood event for Santa Rosa Creek within the City limits. Moreover, previous flood hazard mapping was based on very limited rainfall data. Recent preliminary flood inundation modeling of Santa Rosa Creek and its tributaries show that large portions of Santa Rosa are at substantial risk for flooding from 10-year and 100-year storm events, with significant impacts to the heart of the downtown and residential areas. A comprehensive study of flood potentials and impacts to property owners is needed to protect public health and safety, by identifying the vulnerability of key critical infrastructure and communities and providing the best available information for planning and flood mitigation efforts.

#### PRIOR CITY COUNCIL REVIEW

None.

#### ANALYSIS

The Santa Rosa Creek Flood Study and FEMA Map Revision project will accomplish several tasks. First, in close coordination with Sonoma Water, it will complete refinements to hydrologic and hydraulics models for Santa Rosa Creek and its primary tributaries to integrate new data and model refinements that have been identified since the draft model development in 2017. In partnership with Sonoma Water, new data will be included in an existing model to update the inundation extents for the 10-, 50-, 100-, and 500- year storm events. A topographic floodplain work map will be developed including cross-section locations, existing and preliminary flood hazard extents, and flood elevation data.

Next, the City will provide the updated models, maps, and documentation to FEMA. FEMA will use the data to develop draft effective flood hazard models and update the flood insurance study (FIS) and flood insurance rate maps (FIRM) for the community. Staff will coordinate closely with FEMA to answer questions, ensure accuracy, and supply additional or refined data as FEMA develops the Preliminary and Final FIS and FIRMs.

During development and after finalization of the maps, the City will communicate the findings of the floodplain modeling to stakeholders in the community. Based on preliminary maps, the extent of the floodplain will expand significantly beyond current levels. The project will evaluate the implications of the National Flood Insurance Program (NFIP) for property owners, including but not limited to, identifying: properties in Santa Rosa that are likely to be subject to NFIP regulations, the estimated costs of

flood insurance for property owners, and pathways for property owners to purchase flood insurance.

The entire process from conception to FEMA's adoption of the final maps is anticipated to take approximately three years. Benefits to the community from the project include:

1. Increasing property owner knowledge and awareness of potential flood risks
2. Better informed decision-making for community development and planning
3. Improved planning for protection of infrastructure and floodplains/waterways
4. Improved protection and planning for preservation of life and safety
5. Ability to access funding and grant opportunities to mitigate flood risks

Impacts to the community include:

1. Cost impacts to property owners as an increased number of properties will be required to purchase NFIP flood insurance
2. Increased demand on the design community, as property owners need documentation from local surveyors to obtain flood insurance
3. Increased restrictions on developments: proposed developments in the floodplain may need in-depth hydrologic and hydraulic engineering design during project design review

As part of the project, the City will facilitate a series of public meetings to inform the public, solicit questions and feedback, and address questions and concerns.

### FISCAL IMPACT

The study session, itself, does not create a fiscal impact for the organization.

### ENVIRONMENTAL IMPACT

This study session is exempt from the California Environmental Quality Act (CEQA) because it is not an action which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and is not a project pursuant to CEQA Guidelines Section 15378.

### BOARD/COMMISSION/COMMITTEE REVIEW AND RECOMMENDATIONS

Not applicable.

### NOTIFICATION

Not applicable.

ATTACHMENTS

None.

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