

The Walnut Lane 10 Subdivision project (“Project”) seeks to develop approximately 10 acres approximately 1800 feet north of Grant Avenue and east of Walnut Lane in the city of Winters. The pre-project flood hazard identification requires significant improvement from currently available modeling and mapping in order to safely define future development and mitigation.

Existing FEMA Mapping and Modeling

The Federal Emergency Management Agency (FEMA) publishes their 1-percent Annual Chance (aka: 100-year) Floodplain online at their Map Service Center website. The current mapping of the FEMA floodplain in the vicinity of the Project area is outdated. The Conditional Letter of Map Revision (CLOMR) is intended to update FEMA’s 100-year floodplain map in the project vicinity.

The updated Yolo County Hydrology Manual (2009) now establishes the design rainfall affecting all the subject watersheds. Portions of the watershed terrain features have been modified in the last decades, including recent and significant agricultural grading and increases to the pavement elevations of Interstate 505, all affecting the hydraulics of the area in question. Overall, much more detailed topographic mapping and survey information has been obtained to represent the flow paths and large overflow influences on the City from the north.

Post-Project Conditions (Drainage Plan)

The residual flooding within this tributary watershed is contained within the proposed on-site detention basin and the interim Putah Creek Diversion Channel, and drains to the Caltrans Channel that is located adjacent to I-505 near Putah Creek. The Project will have a negligible effect on Putah Creek flooding given the mismatch in timing of peak runoff resulting from the larger Putah Creek watershed (which is attenuated within Lake Berryessa) and the relative magnitude of flow.

Conclusion

The storm drainage conditions related to the Project, SR 128, and I-505 are all affected by the overflow of Chickahominy Slough and Moody Slough watersheds during larger flood events. The studies performed for the City of Winters and for private development interests fully define this overflow condition during the 100-year conditions using the latest dynamic hydrologic and hydraulic methods. With FEMA’s review and concurrence on hydrologic and hydraulic conditions, the City is now able to move forward with finalizing its storm drainage master planning, and private property owners are now able to propose and implement storm drainage facilities that define and mitigate all known flood hazards affecting their projects, SR 128, and I-505 within the City’s boundary.

The Walnut Lane 10 Project is able to implement a portion of the City’s storm drainage master plan with some interim facilities, and to successfully develop without adversely impacting drainage facilities outside of its Project boundaries.