

Responses to Council Questions and Comments

10/21/2024

Item #8: Introduction of an Ordinance to amend the Zoning Map of the Implementing Zoning Ordinance to Prezone a 12.9-acre Site Located at 5400 Old Redwood Highway to Business Park (BP), Open Space and Park (OSP), and Floodplain Combining District (FP-C) Zoning Districts Prior to Annexation Proceedings to Be Conducted by the Sonoma Local Area Formation Commission (Sonoma LAFCO) and to Approve a Resolution of Application for Reorganization (Annexation) of Properties located at 5400 Old Redwood Hwy.; APNs 047-213-017 and 137-011-048; City Record Nos. PLZA-2023-0001 and PLAN-2024-0001

- **Question:** As currently modeled/analyzed by WEST, it appears fill removal (proxy for increased floodplain storage/detention) has some negative impacts on flood elevations nearby. It seems a little counterintuitive that there are flood increases on the opposite side of the channel but WEST is probably best positioned to explain the dynamics of why this is occurring and potentially explore alternatives that don't have negative impacts. Is that something Cornerstone or the City will be pursuing?
 - **Response:** The revised Fill Evaluation Memo, dated August 30, 2024, prepared by West Consultants, explains the counterintuitive results of flood depth increases resulting from the fill removal. While removal of the fill might seemingly increase flood water storage on-site, there are actually a number of complex dynamics at play. As the memo states, "the 11,500 cubic yards of fill introduces a "blockage" to the flow path of the Willow Brook breakout. This blockage has both positive and negative effects for nearby buildings, depending on whether flow is redirected towards or away from a particular street or structure."

The revised Fill Evaluation Memo also explores an additional scenario (Scenario 2) in which about 90% of fill blockage removed leaving a small strip of ground on the leading edge of the fill with the intent of replicating the flow split around the fill that occurs in existing conditions. As shown in Exhibit 2, the results of Scenario 2 eliminate any significant (>0.01 feet) flood depth increases on the opposite side of Willow Brook Creek. However, there are still flood depth increases for other nearby properties on the near side of Willow Brook Creek in Scenario 2. Thus, West concludes for both scenarios, "because the depth reductions are not significant and there are increases in depth for other properties when fill is removed, the fill removal is not recommended."

In addition, regarding detention, the best locations for detention are immediately adjacent to the creek in order to capture peak flow. An example of this is the Benson/Hummel property (aka pumpkin patch) in which water overtops Stony Point Road to be stored there. The overtopping flows occur near the peak so this site effectively captures peak flows. The fill site in question is too far from the creek to provide this benefit. If converted to a detention pond, it would fill up quickly on the rising limb of the storm and it would provide zero

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benefit for peak flow reduction. The volume of water stored would provide a tiny, possibly immeasurable, downstream benefit. West Consultants does not recommend further study of detention at the fill location due to the reasons stated above.

Public Works staff is looking at a potential detention/retention project converting an existing retention pond at the Redwood Business Park into a detention pond with an associated retention location elsewhere in the north reach. We will be exploring the feasibility of a project that would deliver meaningful floodplain depth reductions in this area using our new HEC-RAS model. Implementation of the updated General Plan with the upcoming Flood Adaptation Plan will provide further guidance by identifying potential projects and prioritizing them based on our new SLR mapping and state criteria.