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City of Belvedere

November 14, 2016

City of Belvedere  
450 San Rafael Avenue  
Belvedere, California 94920

Dear Mayor and Councilmembers,

On behalf of the Town of Tiburon, I am writing to provide input on Item 15 of the agenda for the November 14, 2016 meeting of the Belvedere City Council. This item is titled ***“Review of Stetson Engineers Inc. October 2016 Hydraulic Study of the Rock Hill Drainage G near San Rafael Avenue and Tiburon Boulevard.”***

As detailed in the Staff Report for Item 15, as well as the attached October 2016 Hydraulic Study (the Study), the City of Belvedere and Town of Tiburon have been working cooperatively to better understand the underlying causes of intermittent flooding associated with the Rock Hill Drainage between Tiburon Boulevard and the terminus of the drainage at Richardson Bay. Although Town staff generally supports the conclusions and recommendations included in the Study, the Town disagrees with some of the information provided in the associated Staff Report.

The first paragraph on page 3 of the Staff Report reads in part, ***“The hydraulic modeling determined that the undersized Bike Trail Culvert is the root cause of flooding in the vicinity of properties adjacent to the Bike Trail and along Lagoon Road in Belvedere”***. We strongly disagree with this statement, and believe it is not only incorrect, but is also not supported by the results of the Study and directly contradicts other information provided in the Staff Report itself.

The hydraulic modeling conducted as part of the Study looked at the relative capacities of four components in the drainage study area: The Caltrans culvert under Tiburon Boulevard, the Bike Trail Culvert in Tiburon, the channel on private property in Belvedere, and the culvert under San Rafael Avenue in Belvedere. The Caltrans culvert was determined to have capacity sufficient to handle flows associated with a 100+ year flow event. Of the remaining 3 components, the Bike Trail Culvert was

Erin Tollini  
Mayor

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Town Manager



determined to have the largest capacity at 70 cubic feet per second, with the channel on private property at 10 cubic feet per second (85% less than the Bike Trail Culvert), and the San Rafael Avenue culvert at 57 feet per cubic second (18.5% less than the Bike Trail Culvert). In other words, if the Bike Trail Culvert was operating at peak capacity, the capacities of the downstream open channel, and the San Rafael Avenue Culvert would be significantly exceeded. To conclude the upstream component with the largest capacity is the root cause of flooding, when the 2 downstream components have less capacity, not only defies logic; it is not supported by information provided in the Study.

The second paragraph on page 1 of the Study begins with the following statement, ***“During heavy storms, debris-laden stormflow can overwhelm the drainage system capacity causing storm water to spill over the bike trail and flood adjacent properties in Belvedere causing property damage as it makes its way to Richardson Bay”***. This language is also included in the Staff Report on page 2. The staff report also notes that ***“the capacities of the culverts decrease in the downstream direction, which is opposite to what’s normally needed to control flooding”***. It is clear from these statements the ‘cause’ of any flooding is the inability of the drainage ‘system’ to handle elevated storm flows, or put more simply, this is a systemic problem which requires a systemic approach to fix it.

Tiburon is interested in improving the existing drainage system, and believes the parties should work together towards that goal. The Town appreciates the opportunity to provide input on this matter, and supports City staff’s recommendation to develop a project scope and cost sharing agreement for a permanent drainage system solution providing a 100 year flood capacity for this drainage system covering property owned by all three parties.

Sincerely,

Greg Chanis, Town Manager  
Town of Tiburon