Mike Perlmutter, Measure DD (MDD) Coalition Coordinator

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Dear Mike,

The following is an outline of the comments we intend to make at the 11/15 MDD Coalition meeting related to the draft report entitled “Tide Gate Operations Memorandum for the 7th Street Flood Control Station” (FCS) by the Wood Rogers (WR) environmental consulting firm dated Nov., 2020.

1. **Background.** Kristin Hathaway introduced the draft report at the Coalition’s Sept. 20 meeting. In her introduction Kristin described the report as having come to two major conclusions regarding the FCS.
2. First, according to Kristin the report concluded that no adjustments to the tidal flow regime currently in place would have any effect on tidal flow rates and any associated water quality parameters in Lake Merritt due to water flow obstruction caused by the presence of the BART train tunnel beneath the Lake Merritt Channel (LMC). In fact, not only does the WR study makes no such statement, it contains information that directly refutes any such effect by the BART tube. Specifically, according to the WR study the height of the top of the BART tube is -0.3 ft. NAVD. Since the predominant tidal levels in the Oakland-Alameda Estuary range between 6.0 ft. NAVD at high tide and 0.0 ft. NAVD at low tide, the BART tube has absolutely no effect on tidal flows in the LMC that it is the purpose of the FCS to manage.
3. Second, Kristin stated that the County lacks the ability to make any changes in its current flood control regime due to the absence of “remote control” over the settings that control the operation of the pumps and tide gates at the FCS. Again, the WR Report does not appear to discuss the significance of the presence or absence of “remote control” technology on the ability of the FCS to meet its existing or revised operational standards. While the lack of “remote control” over the FCS may prevent the County from making rapid changes in the settings that govern the Flood Control District’s (FCD) operation of the FCS, the changes in operational parameters recommended herein for the summer/dry season should not require more frequent changes in parameters than is currently the case. Moreover, if the operational capability of the FCS needs to be upgraded to enable the FCD to operate the FCS in accordance with the standards recommended herein, It is reasonable to expect the County to provide to the FCS an operational capability, both on site and remote, as needed to meet operational standards, that is equivalent to the operational capability that it provides to other infrastructure it operates of comparable complexity and sophistication, such as the drawbridges across the Oakland Alameda Estuary.
4. **Value of Unimpeded Tidal Exchange/Circulation/Fluctuation (ECF).** There are a multitude of environmental benefits to Lake Merritt from operating the FCS in a manner that maximizes tidal ECF. Among these benefits are a) water quality benefits in forms which include but are not limited to fostering healthy levels of dissolved oxygen and flushing of contaminants such as nitrogen and other components of fertilizers out of the lake, b) introduction of zooplankton and other fauna that comprise critical elements of Lake Merritt’s food chain for fish, waterfowl, and other wildlife, and c) creating favorable conditions for habitat for shorebirds, pickleweed and other wetland vegetation in the natural and restored wetland areas along the natural shorelines of Lake Merritt and of the LMC.
5. **Enhanced Tidal ECF Furthers the Purposes and Goals of Measure DD.**  According to the official statement in support of Measure DD one of the principal purposes of the replacement of the 10th and 12th St. culverts with free-standing bridges was improvement in tidal ECF in Lake Merritt and the LMC.
6. **The WR Report: The Good.** The WR Report accepts as valid the scientific research which shows, at least under certain circumstances, a causal relationship between constricted tidal flows into and out of Lake Merritt and level of dissolved oxygen that are below minimum water quality standards (5 PPM) in the plan for SF Bay promulgated by the RWQCB. In recognition of this adverse effect on Lake Merritt’s environmental condition, the WR Report recommends consideration of a means of mitigating or reducing this effect by keeping the FCS’s tide gates open during night time hours. This mitigation measure should be considered as an adjunct to, and not a replacement for, changes in the operational parameters of the FCS recommended herein.
7. **The WR Report: The Not So Good.** Although the WR Report does not acknowledge this to be the case, the scope of the report is effectively limited to the operational parameters of the FCS during the summer or dry season. It needs to be acknowledged that, during this approximately 6 month period of time from April through September, the risk that the FCS was constructed to manage, namely, the risk of damage from storm and tidal related flooding, is almost completely absent. If the contract between the City and WR called for an analysis of operational parameters over the course of an entire year, WR should promptly research and produce a supplement to its draft study that analyzes the operational parameters in accordance with which the FCD operates the FCS during the winter or wet weather months of October through March. If the City’s contract with WR calls for an analysis of only summer or dry weather operational parameters, the City should seek to contract with either WR or another qualified consultant to produce an analysis of meteorological data, tidal levels, and other parameters that the FCD employs during winter/wet weather months to operate the FCS.
8. **Recommendations: The City.**  In Section 2.4 the WR Report refers to the historic operational standard for the FCS of maintaining the tidal level in Lake Merritt between 3.2 and 4.2 ft. NAVD. In later section 5.2 the WR Report recommends continual observance of these standards, at least during daytime hours. As previously noted, these tidal levels are in stark contrast to the tidal levels that would naturally occur in Lake Merritt if there were no FCS, namely, 0.0 and 6.0 ft. NAVD. They also conflict sharply with the tidal water depths which have actually occurred in Lake Merritt, at least in recent years, as shown in tide charts that depict actual water levels in the lake over various periods of time. These charts show frequent water levels of well over 5 feet at the upper range and well under 3 feet at the lower range. The operational parameters that the WR Report recommends that the FCD employ are unnecessary, harmful to the lake, and do not reflect water levels that actually occur in the lake as controlled by the FCS. The City should request the FCD to liberalize these parameters for both upper and lower tidal limits. (Note: tidal flows between the upper and lower limits should be unimpeded tidal flows, i.e., tidal flows which result from the tide gates on both sides of the FCS being fully open, not from the gates on only one side of the FCS being open, which is the status of the FCS that the FCD currently views as providing unrestricted tidal flow.)
9. A new upper limit should be established at a level of 5.5 ft. NAVD. This level is below the docks and other nautical infrastructure in LM. The WR Report raises the issue of public safety if the upper limit for water level in the lake is raised above the WR Report’s recommended level of 4.2 ft. NAVD. However, there is no record of falls into the lake, let alone drownings, during the many times in recent years that the water level in the lake has exceeded 5 ft. NAVD. Tide gate closure would occur only when the tide levels in the Oakland Alameda Estuary were projected to be above 5.5 ft. NAVD.
10. Similarly, the recommended low tide limit should be lowered from 3.2 to 2.0 ft. NAVD. The WR Report defends the 3.2 ft. limit on the basis of the minimum water level needed for recreational boating. However, the WR report’s analysis is based on allowing boating in water as shallow as 2 ft., a depth which occurs only very close to Lake Merritt’s shoreline. The rules of the Lake Merritt Boating Center prohibit boating within 50 ft. of the shoreline, a requirement that keeps boats out of the shallow waters that the WR Report uses as the basis for its recommendation. A 1983 bathymetric study found that the water depths in Lake Merritt not in close proximity to the shoreline are generally in the -4 to -5 ft. NAVD range. A 2 ft. NAVD allowance in addition to such water depths will provide more than adequate water depths for boating.
11. **Recommendations: The Measure DD Coalition.** The recommendations listed in the preceding paragraphs will require additional thought and deliberation as a precondition to their full implementation. The Measure DD Coalition should appoint a subcommittee of Coalition volunteers to meet with Kristin and whomever else she elects to invite to engage in these deliberations. The subcommittee should be required to report back to the full Coalition at times deemed appropriate by the Coalition.

Respectfully submitted,

John Bowers and Katie Noonan