

TECHNICAL MEMORANDUM

Date: July 27, 2021 **BKF Job Number:** 20191505
Deliver To: Napa Valley College
From: Christine Gurske
Subject: Napa Valley College – Dormitory Flows and Capacity Fees

The purpose of this memo is to establish the development's sewer demand for the new dormitory style building to the Napa Sanitation District system and determine the associated capacity charges.

Sanitary Sewer Demand:

For this project, Building #3 is classified as a dormitory. Dormitories are known to produce lower sewer flows than both single-family homes and apartments. Per Metcalf & Eddy (4th Edition), Table 3-4 (page 159), typical flows from dormitories range from between 20-50 gpd/person, depending on seasonal variations in flow. In Napa Sanitation Districts' service area, an equivalent dwelling unit (DU) is based on a flowrate of 117 gpd. Since capacity charges are determined based on maximum flows, it is appropriate to select a flowrate that falls within the higher end of the published range.

If a flowrate of 47 gpd/person is used to represent the peak dormitory flow, the sewer capacity charge would be 0.40 DU/Persons. In this instance, a dwelling unit (DU) represents one dormitory room, and there are 60 single occupancy rooms and 76 double occupancy rooms. Building #3 calculations are based on 1.55 Persons/DU per the previous occupancy and dwelling until count, as well as the architectural design and owner intent.

If a flowrate of 47 gpd/person is used to represent the peak dormitory flow, the sewer capacity charge would be 0.40 EDU/person. Therefore, single-occupancy dorm rooms would require 0.40 EDU and double-occupancy dorm rooms would require 0.80 EDU of sewer capacity charges.