



MEMORANDUM

Date: April 24, 2019

To: Brian Schuster, Environmental Science Associates  
cc: Joe Kirchofer  
Kearstin Dischinger  
From: Steven L. Vettel  
Re: Balboa Reservoir project  
Subject: Construction AQ mitigation measures

You have requested that the project sponsor explore the feasibility of the following potential mitigation measure for the Balboa Reservoir project.

*"The project sponsor shall ensure that all on-road heavy-duty diesel trucks with a gross vehicle weight rating of 19,500 pounds or greater used at the project site, including heavy-duty construction trucks (such as haul trucks, water trucks, dump trucks, and concrete trucks), and all vendor trucks (such as construction material delivery trucks) be model year 2014 or newer."*

1. Heavy Duty construction trucks, such as haul trucks, water trucks and dump trucks.

San Francisco has for the last several years imposed a standard off-road construction vehicle mitigation measure. The project sponsor will comply with this standard mitigation measure to reduce construction Air Quality impacts.

However, imposing an on-road vehicle restriction requiring all heavy-duty trucks to be model year 2014 or newer is not feasible. For the most part, these trucks are not owned or operated by the general contractor or earthwork subcontractors. According to Cahill Contractors, the sponsor's general contractor consultant, most dirt hauling truckers are independent operators. Typically, an earthwork subcontractor will line up trucking a day in advance by calling brokers or large haulers. They in turn call independent truckers to fill any needs as few firms have a large quantity of their own trucks. Cahill estimates that approximately one-half of the haul trucks are older than model year 2014 and would thus be disqualified from performing haul work on the project. With the restrictions in age of truck, that the project would likely not be able to find a sufficient number of available trucks on a daily basis to manage the large quantity of material that would be expected for this large site within the project schedule described elsewhere in the EIR.

The likely outcome would be a doubling of the required haul days because of the reduced availability of haul trucks per day. Our current estimate for hauling is 120 loads per day for 15 work days. With a restriction in age of truck, that would double to 30 days. Adding 15 work days to the overall schedule would increase costs for other equipment, labor, water trucks, etc. costing the project approximately \$250,000 in extra costs, plus a three-week completion delay. Other construction stages would similarly be extended, adding further substantial costs and delay.

2. Vendor Trucks.

Cahill Contractors has confirmed that it is not possible for the general contractor to require vendor trucks, including concrete trucks, that make deliveries to the project site to be restricted to model years after 2014 because the contractor would be no means of imposing the restriction on third party vendors, monitoring it, or enforcing the restriction.

It should be noted that all on-road vehicles, whether heavy duty construction trucks or vendor trucks, must meet California emission standards regardless of model year.