

Caldecott Tunnel Truck Study

The Air District supported a multi-year California Air Resources Board study at a highway site along Caldecott Tunnel to measure the emissions benefits of CARB's [Truck and Bus Regulation](#). Like the Drayage Truck Regulation described above, this regulation required the rapid modernization of the on-road heavy-duty diesel truck fleet and accelerated adoption of DPFs and SCR by all trucks and buses operating in the state of California.

Between 2014 and 2021, researchers from the University of California, Berkeley, and Lawrence Berkeley National Laboratory used the Air District's mobile sampling van to measure tailpipe emissions from thousands of in-use heavy-duty trucks as the Truck and Bus Regulation was phased-in. Compared to the pre-regulation fleet measured in 2010, the fraction of on-road trucks equipped with DPFs increased from 15% in 2010 to 99% in 2021 and the fraction equipped with SCR increased from 2 to 87%. As a result, fleet-average emission rates decreased by ~80% for both BC and NO_x.

Initial study results were published in Environmental Science & Technology in [2018](#) and [2019](#).



The Air District mobile sampling van is used to sample truck plumes from above the west entrance to the Caldecott Tunnel (2014).