Transit Saves 2024 Methodology

Transit Saves You Stress

Multiplied average weekday system ridership of approximately 160,000 riders (from April 2023) by 50% and 100% to arrive at a range of 80,000 to 160,000 riders that would shift to driving if BART is not available.

Divided the range of potential mode shift riders by 1.52 persons per vehicle for all vehicle types based on the 2022 National Household Travel Survey to arrive at a range of vehicles (53,000 to 105,000) shifted onto regional roadways, if BART is not available.

Multiplied this range of vehicles by the average distance BART riders traveled in 2020 (14.8 miles) as represented by total annual passenger miles/total exits; this arrives at a range of 777,000 to 1,555,000 miles. 1.2 million miles represents roughly the midpoint of this range. Note that for simplicity, this did not include the miles driven by passengers from their origins to BART stations.

Transit Saves the Planet ("gas pump")

Multiplied the range of miles stated above by a factor of 397 grams of CO_2 equivalent per mile (a 20-year average for US vehicles with model years between 2001 to 2021 as estimated by the US Environmental Protection Agency (EPA)) to arrive at a range of 308,655,000 to 617,309,000 grams (or 308,655 to 617,309 kg).

We then input that range in kilograms into the US EPA Greenhouse Gas Equivalencies Calculator to get an equivalent gallons of gasoline consumed (based on a factor of 8.9 grams of CO_2 per gallon of gasoline consumed); this arrives at a range of 35,000 to 69,000 gallons of gasoline. We chose the average of this range.

Transit Saves the Planet ("forest")

Using the same EPA Calculator as mentioned above, we generated the number of trees seedlings that would need to be planted and the amount of carbon (36.4 pounds of carbon per tree) they would sequester for 10 years – approximately 5,100 to 10,200 tree saplings.

We then divided this range in tree saplings by the number of trees per acre according to US Forestry Service data and arrived at approximately 50 acres of trees. The land area of San Francisco is almost exactly 30,000 acres. Dividing 30,000 acres by 50 acres per day gives us 600 days – less than 2 years!