



Preliminary 2023 Emissions Inventory Estimate for New Development and Redevelopment Projects

Background

The objective of this document is to provide a rough estimate of the baseline emissions of nitrogen oxides (NO_x) in 2023 that could be affected by potential facility-based measures that would apply to new development and redevelopment projects. The estimated emissions values described in this document are not intended to be final values used for the State Implementation Plan (SIP) or for regulatory purposes. Instead, they are intended only as a point of reference to guide future strategies, policies and/or rules aimed at reducing emissions from new development and redevelopment-related activities in the Basin. More detailed emissions inventories for this source category will be developed in future public processes for any specific measure that will be used to obtain SIP credit (such as a regulation, MOU, etc.) and for future Air Quality Management Plans.

NO_x Emissions Inventory for New Development and Redevelopment Projects

The estimate presented here relies on the substantial work that has previously been conducted to estimate construction and vehicular-related NO_x emissions, including work performed by California Air Resources Board (CARB) staff for the 2016 Air Quality Management Plan (AQMP) emissions inventoryⁱ and the Southern California Regional Association of Governments (SCAG) and SCAQMD staff during development of the Final 2016 AQMP. The table below provides a summary of the overall NO_x emissions inventory for off-road construction equipment and vehicular emissions potentially associated with new and redevelopment projects in 2023.

Methodology for Estimating 2023 NO_x Emissions from Off-Road Construction Equipment

Off-Road Construction Equipment

The 2023 NO_x emissions inventory for off-road construction equipment calculation began with the 2023 construction and mining category of off-road emissions from the SIP inventory. The ratio of the economic contribution of construction compared to mining in the SCAG regionⁱⁱ was then applied to estimate final off-road emissions associated with new and redevelopment projects.

On-Road Emissions

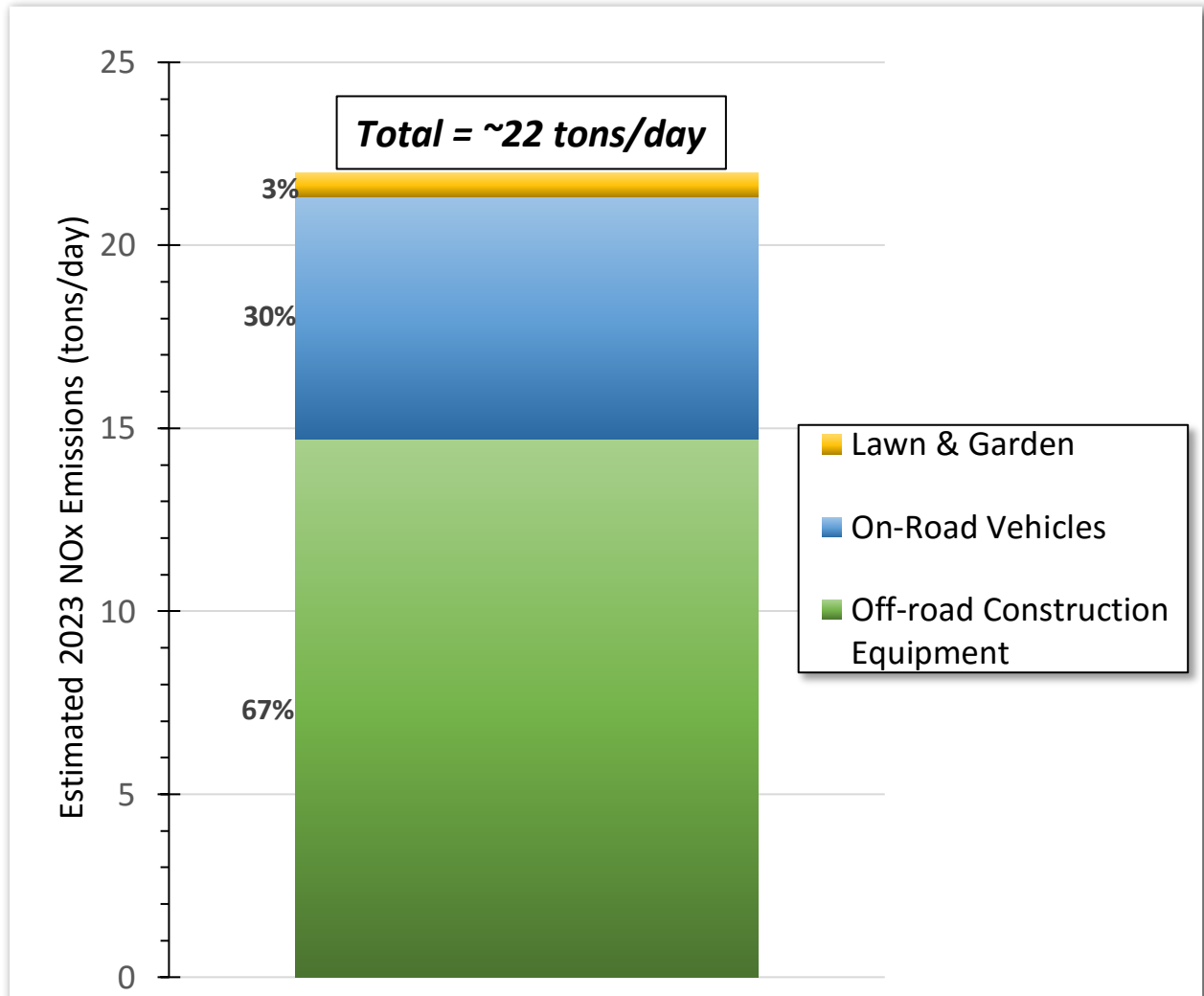
The estimated 2023 vehicular NO_x emissions associated with new development and redevelopment projects in the Basin was calculated by multiplying the growth in total on-road VMT from the base year of 2012 to 2023 (~7%) with total on-road NO_x emissions in 2023.

Lawn and Garden Emissions

Estimated 2023 emissions in this category began with extracting the ‘commercial’, ‘residential’, and ‘other’ NO_x emissions from the SIP inventory. The amount of growth in employment, housing units, and population were then multiplied with each of the categories, respectively, then summed to estimate the portion of lawn and garden emissions associated with new and redevelopment projects.



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Vehicle Type	2023 NOx (tons/day)
Off-road Construction Equipment	14.7
Vehicles (all vehicle classes)	6.6
Lawn and Garden	0.6
Total	~22

ⁱ <https://www.arb.ca.gov/app/emsmv/fcemssumcat/fcemssumcat2016.php>

ⁱⁱ 2016 Regional Transportation Plan, Goods Movement Appendix, Figure 5