

CITY OF FONTANA AIR QUALITY UPDATE

City of Fontana – September 14, 2021

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RAMBOLL

Bright ideas. Sustainable change.

OUTLINE

- Trends in Criteria Air Pollutant Concentrations
- Trends in Cancer Risk Impact of Toxic Air Contaminants
- Overview of State and Local Air Quality Regulations
- Ramboll Study on Evaluating Siting Distances for New Sensitive Receptors Near Warehouses
- The California Environmental Quality Act (CEQA) Process
- City of Fontana Plans – GHG/Air Quality Elements
 - General Plan and Active Transportation Plan
 - Southwest Industrial Park Specific Plan
- City of Fontana Potential Next Steps

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PAST AND CURRENT AIR QUALITY CONDITIONS

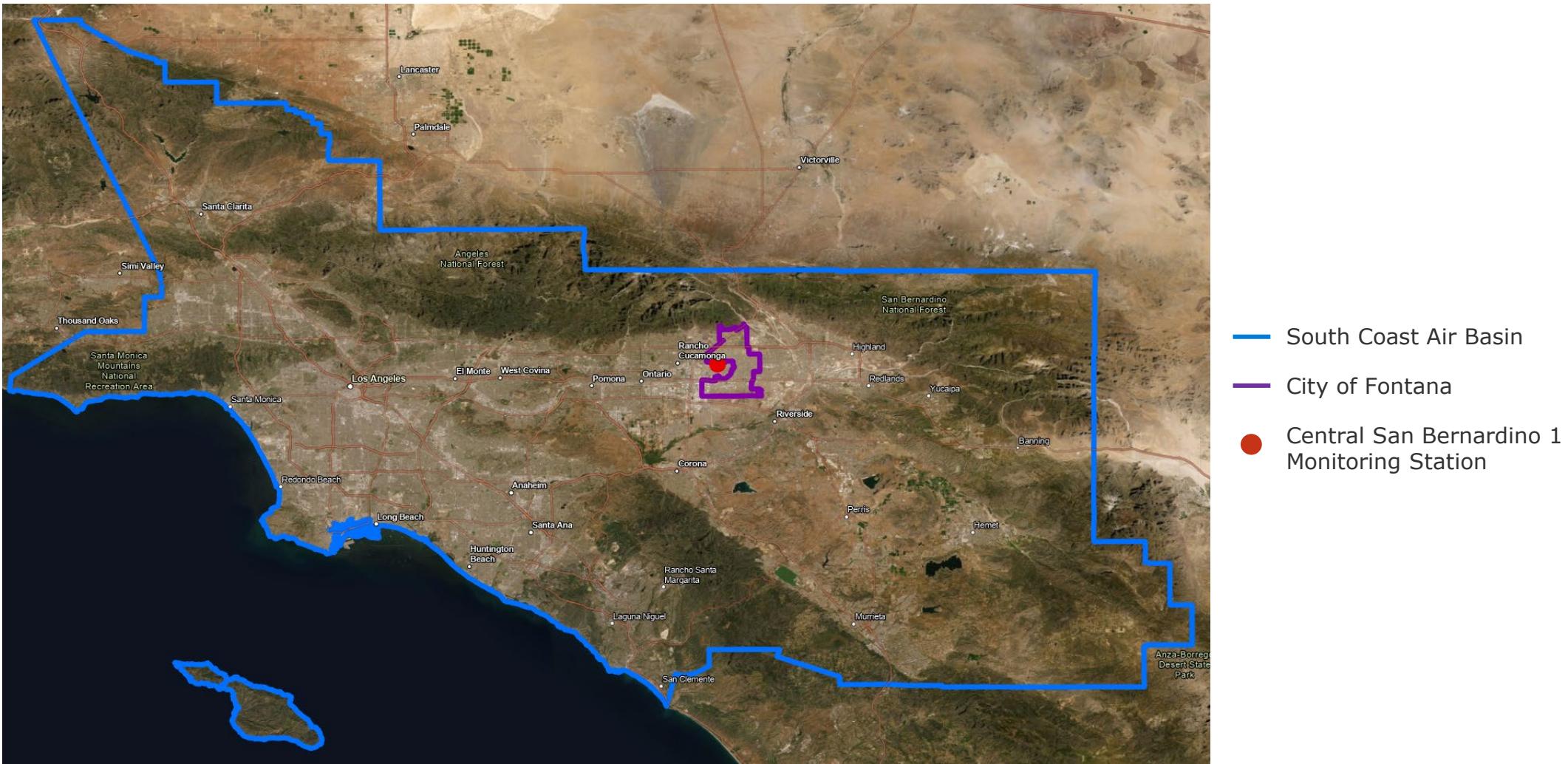


Downtown Los Angeles Skyline, 1995¹



Downtown Los Angeles Skyline, 2017²

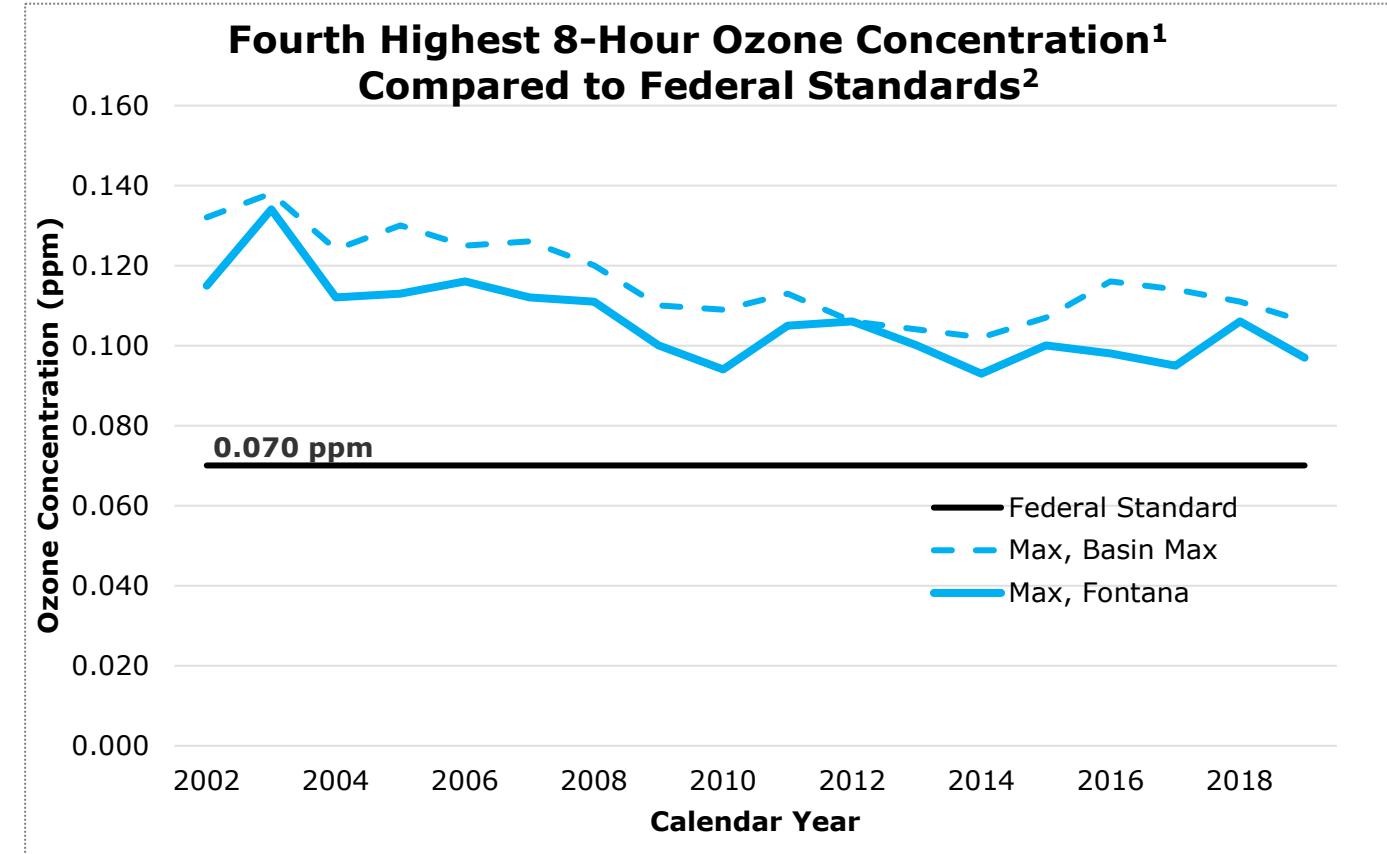
LOCATION OF FONTANA WITHIN AIR BASIN



OZONE (O₃) CONCENTRATIONS IN FONTANA ARE BELOW THE BASIN-WIDE MAXIMUM

Ozone exposure can cause coughing and sore throat, inflame and damage the airways, and aggravate lung diseases.³

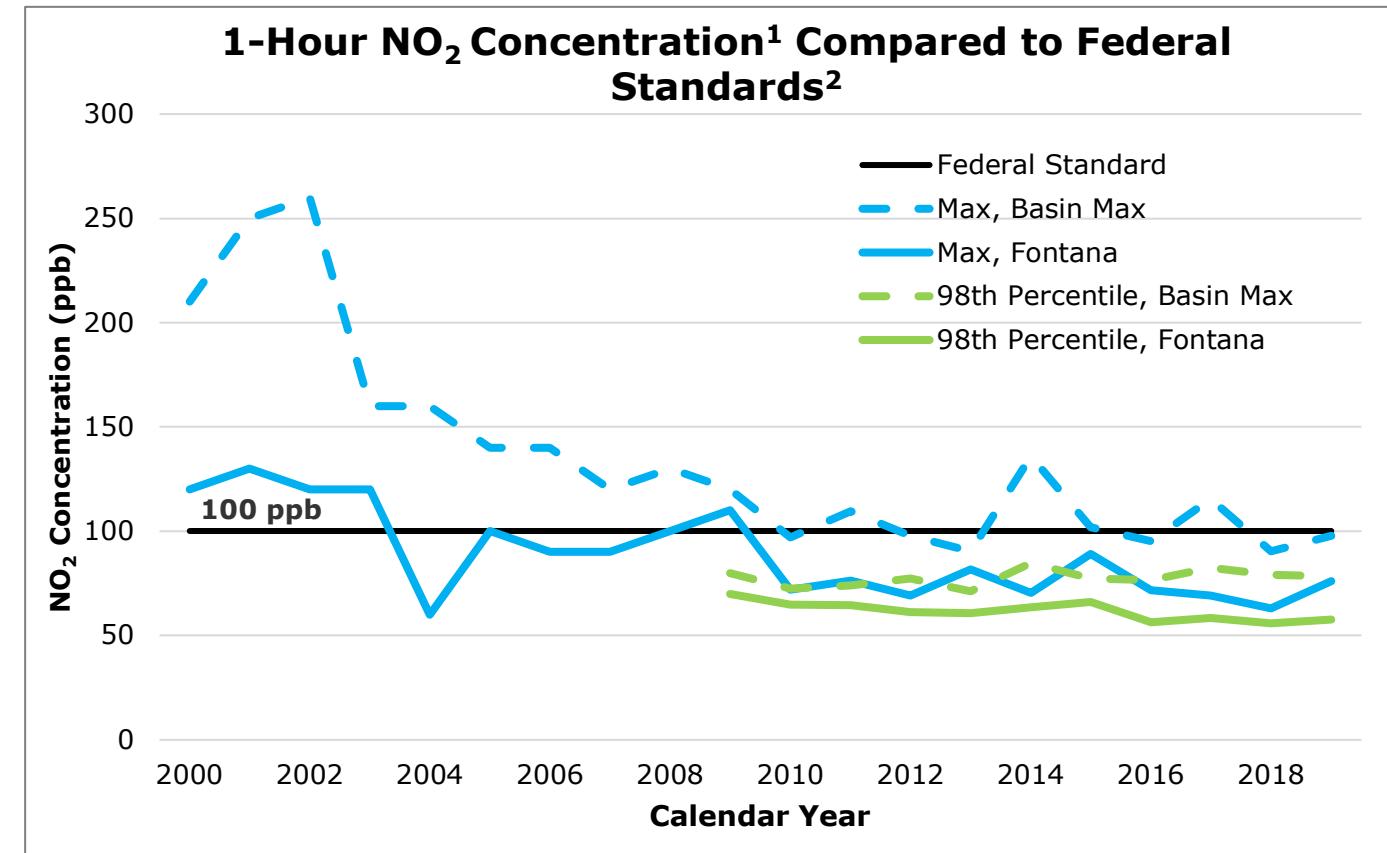
Between 2004 and 2019, ozone concentrations in Fontana **exceeded the federal standard 47-85 days per year.**¹



NITROGEN DIOXIDE (NO₂) CONCENTRATION IN FONTANA ARE BELOW THE FEDERAL STANDARD

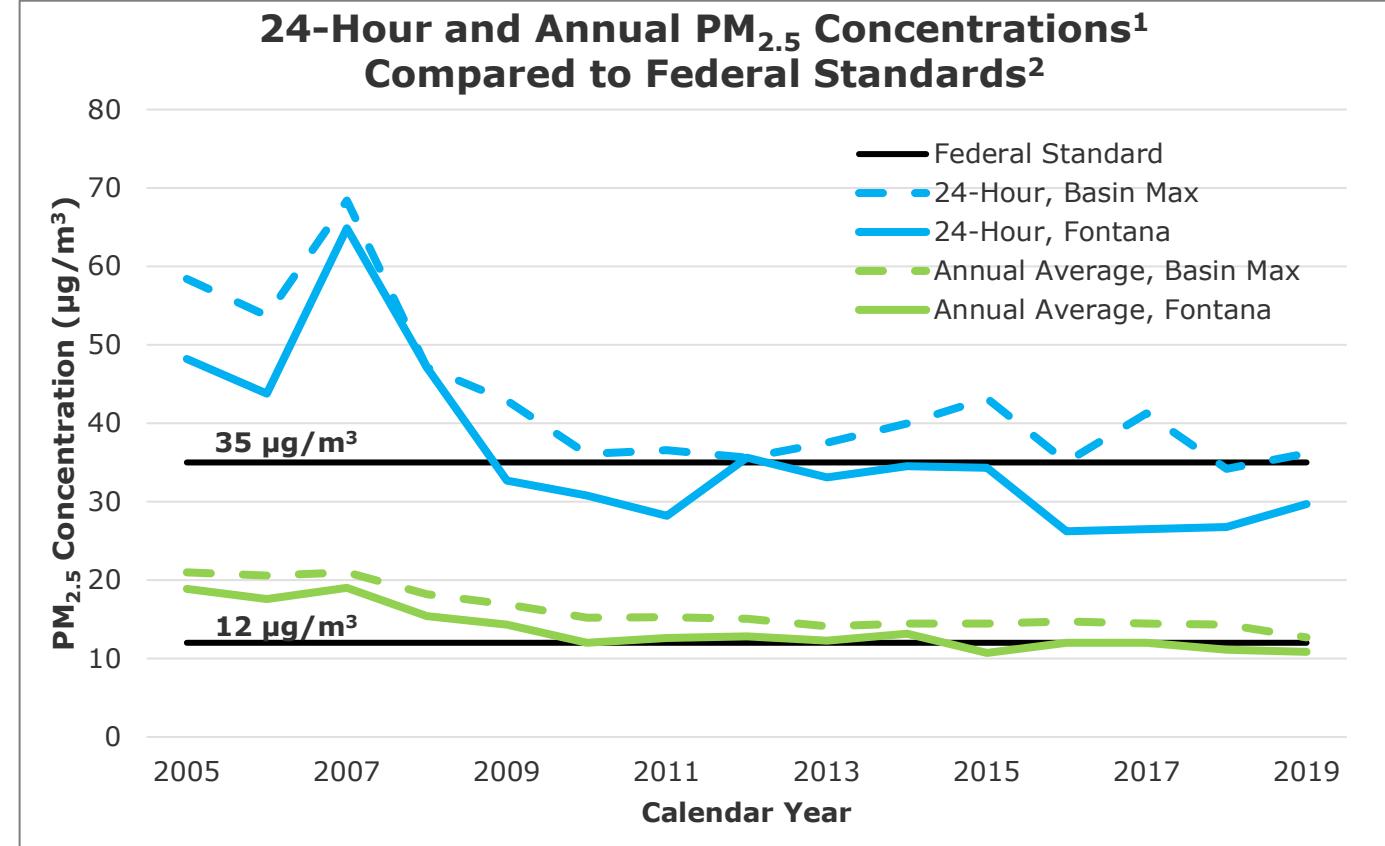
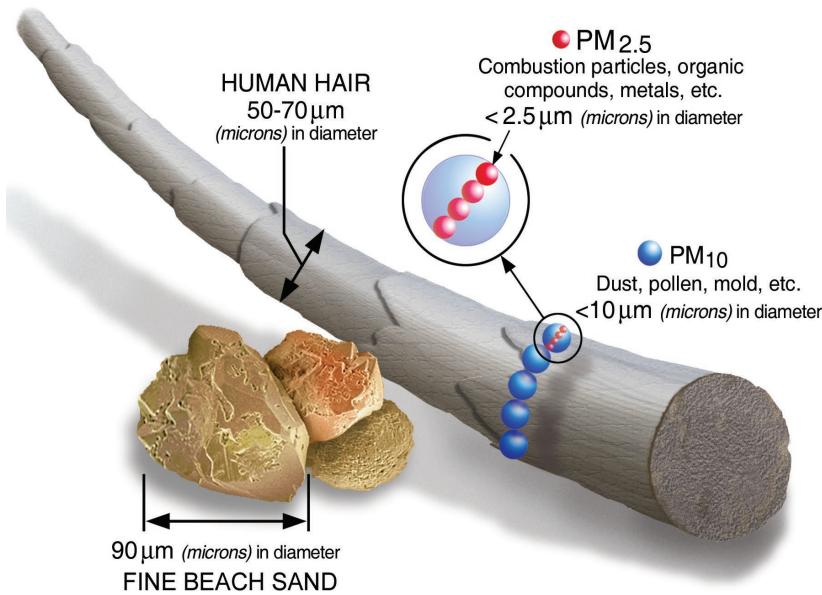
NO₂ can aggravate respiratory disease, cause coughing or difficulty breathing, and contribute to development of asthma.³

NO₂ is a precursor to the formation of ozone.

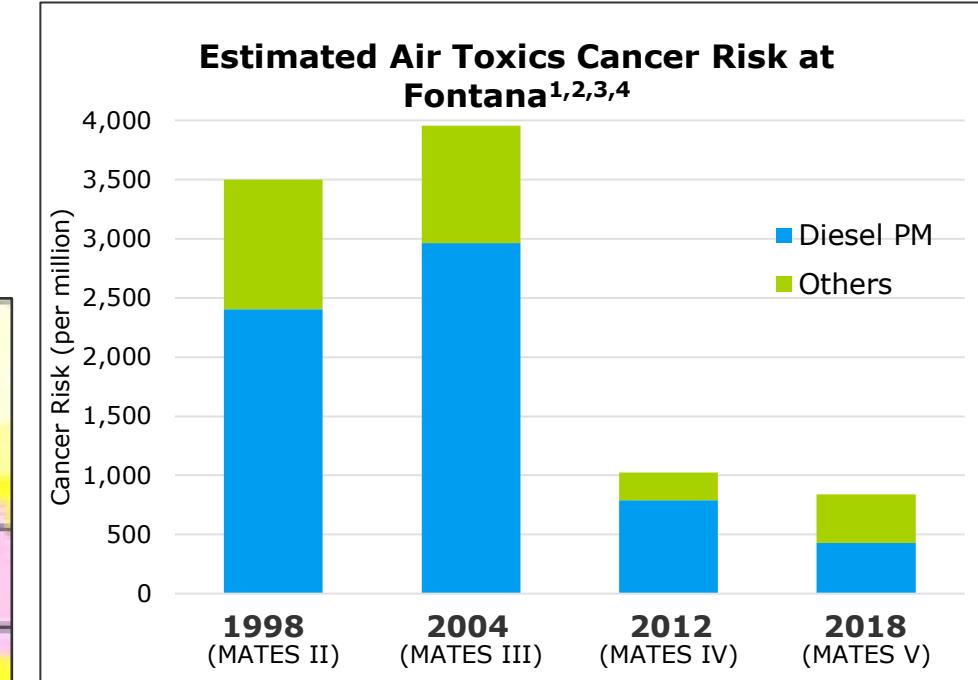
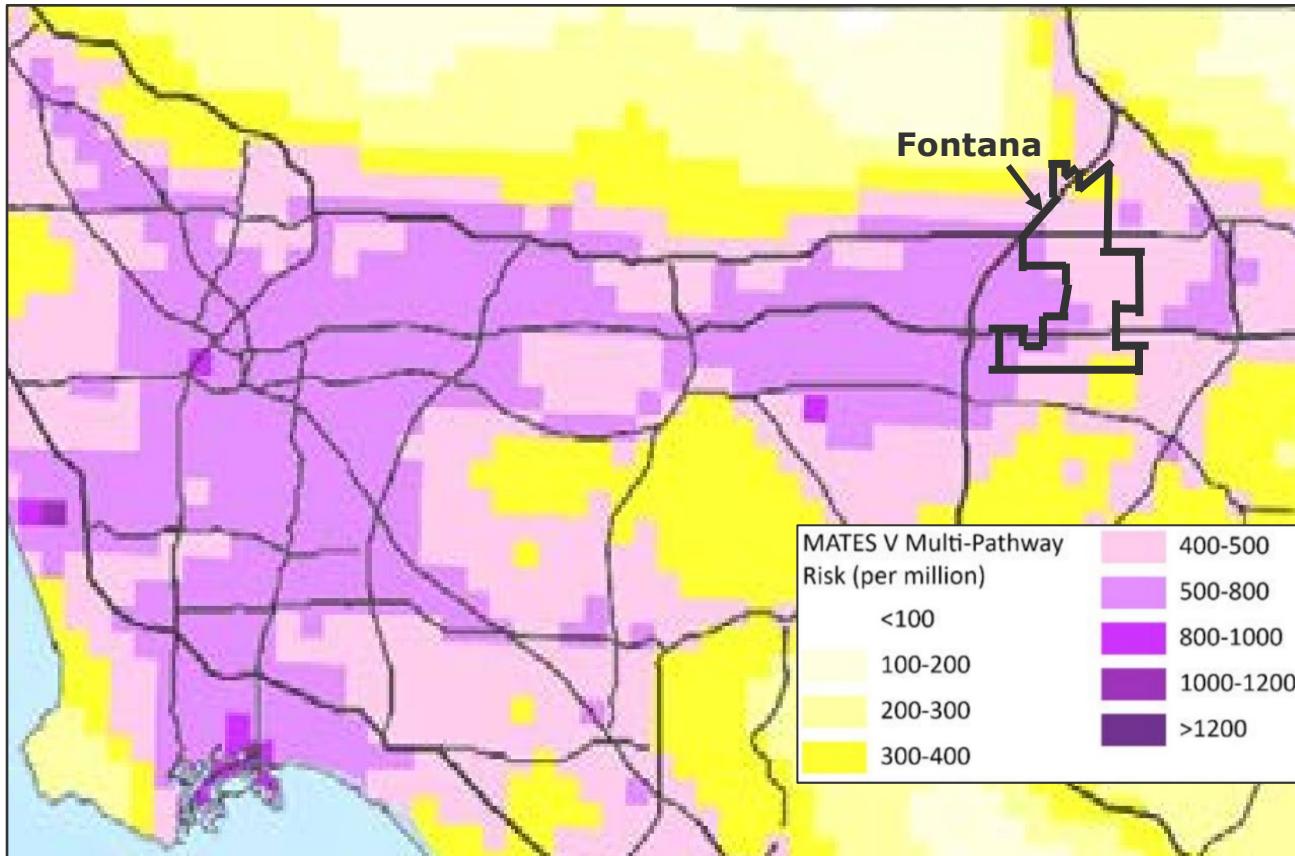


PARTICULATE MATTER (PM_{2.5}) CONCENTRATIONS IN FONTANA ARE BELOW THE FEDERAL STANDARDS

PM_{2.5} exposure can cause nonfatal heart attacks, irregular heartbeat, increased respiratory symptoms, and decreased lung function.³



AIR TOXICS CANCER RISKS HAVE REDUCED SIGNIFICANTLY SINCE EARLY 2000s



Air toxics cancer risk is **less than 0.25%** of the total probability of contracting cancer.⁵

Air toxics cancer risk has **decreased by 76% from 1998 to 2018** and is **expected to decrease by an additional 20% by 2023.**

CURRENT REGULATIONS HAVE CLEANED THE AIR LAST TWO DECADES

Truck and Bus Regulation¹



2008, amended 2011

Innovative Clean Transit Regulation⁴



October 2019

Low NO_x Heavy Duty Omnibus Regulation²



August 2020

Advanced Clean Trucks Regulation³



March 2021

Advanced Clean Cars⁵



January 2012

Warehouse Indirect Source Rule⁶



May 2021

FUTURE REGULATIONS WILL FURTHER CLEAN THE AIR NEXT DECADE

Advanced Clean Cars II¹



July 2022

In-Use Off-Road Diesel-Fueled Fleets Regulation⁴



January 2023

Heavy-Duty Inspection and Maintenance Program²



January 2022

Advanced Clean Fleets Regulation³



January 2022

In-Use Locomotive Regulation³



May 2022

Cargo Handling Equipment Regulation to Transition to Zero-Emissions⁶



January 2023

Transport Refrigeration Unit Regulation⁷



October 2021

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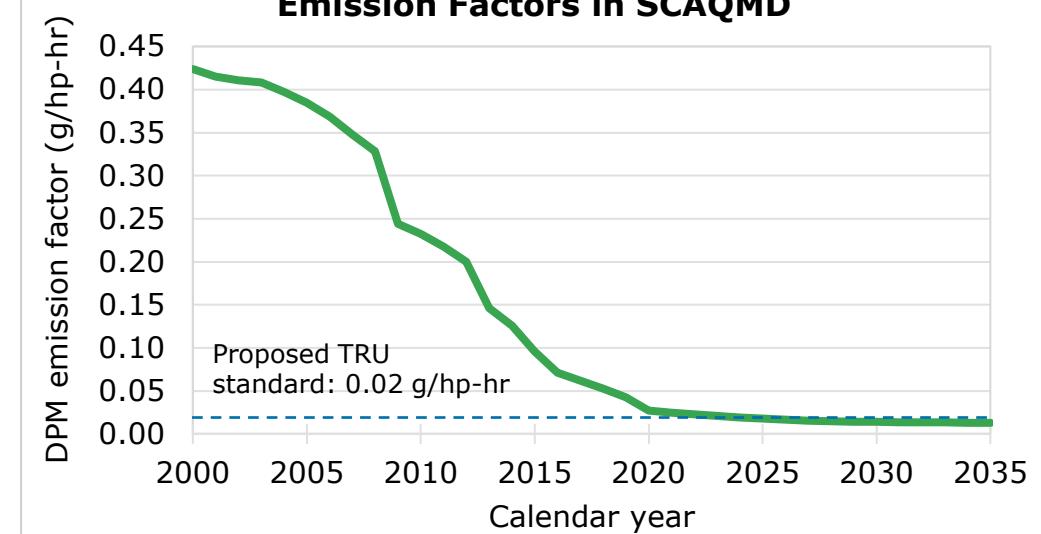
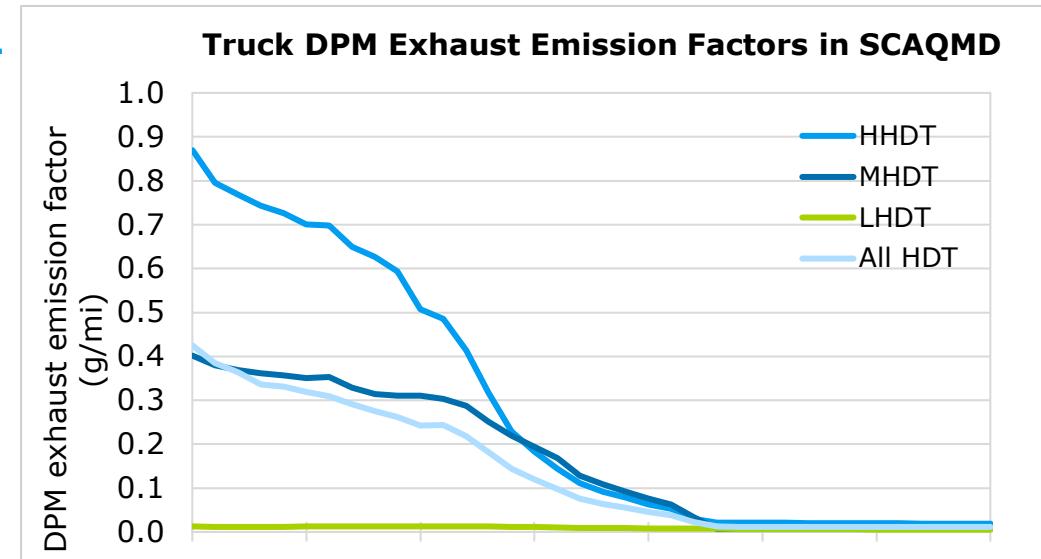
CARB 2005 LAND USE GUIDANCE¹

- **Recommends a 1,000-foot siting distance** for warehouses/distribution centers, based on 2005 study
- Frequently cited by regulatory agencies when siting new warehouses, but is **based on EFs and risk-assessment methodology that are now outdated**

What Changed Since 2005

Diesel particulate matter (**DPM**) **emissions** from heavy-duty trucks (HDT) and transportation refrigeration units (TRUs) have **decreased significantly** over the last 15 years as a result of federal/state regulations

OEHHA updated their guidance for estimating cancer risk in 2015, incorporating age sensitive factors for children that **increased risk associated with DPM by a factor of ~2.5**



Note: DPM is assumed to be equal to diesel PM₁₀ exhaust emissions.

RAMBOLL STUDY: EVALUATING SITING DISTANCES FOR NEW SENSITIVE RECEPTORS NEAR WAREHOUSES

Scenario 1 Trucks with TRU

40 trucks per day
0.25-mile travel distance onsite per truck
15-minute idle time per truck per day
TRUs operate for 300 hours per week*

Scenario 2 Trucks only

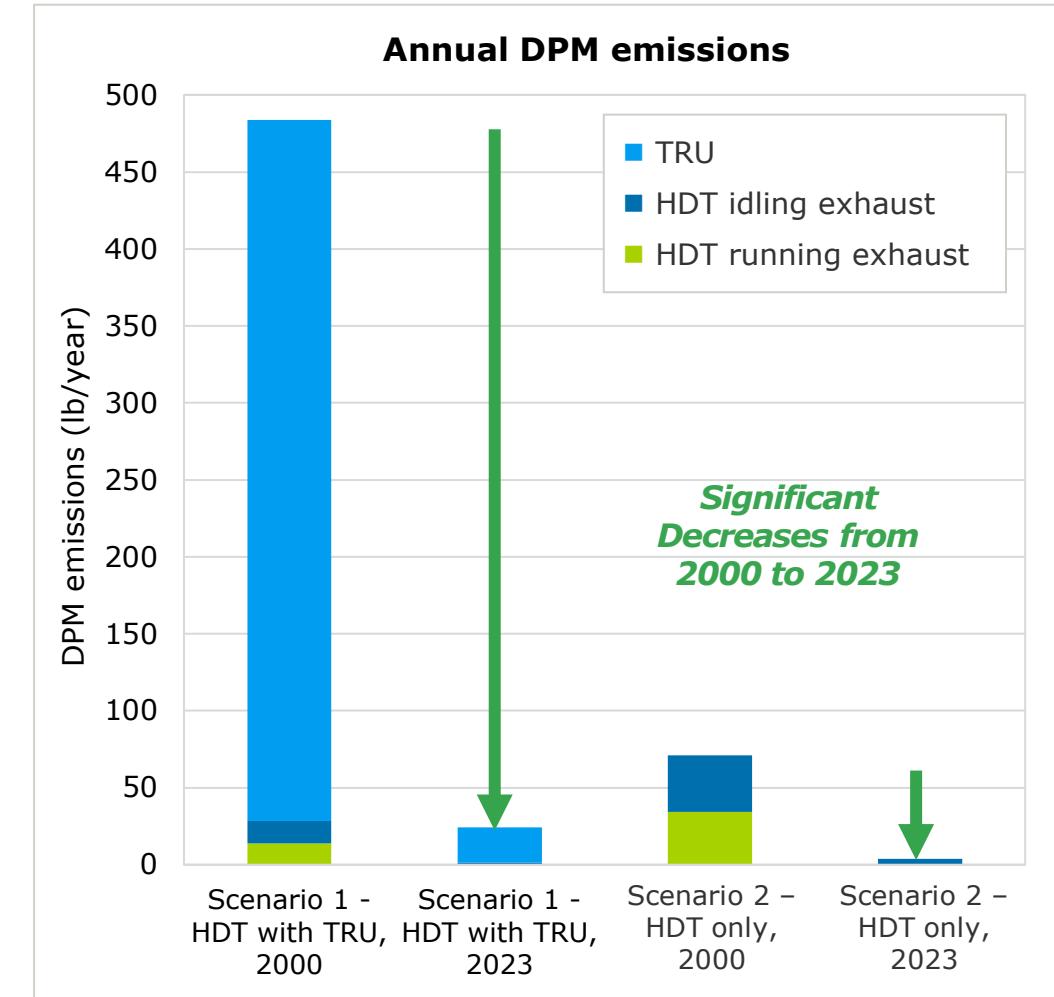
100 trucks per day
0.25-mile travel distance onsite per truck
15-minute idle time per truck per day
No TRUs

Operating schedule assumed to be 7 days per week, 365 days per year

CARB ATCM idling rule that limits truck idling to 5 minutes at any one location was adopted in 2005

*Equivalent to about 1.1 hours per truck per day

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MODELING RESULTS

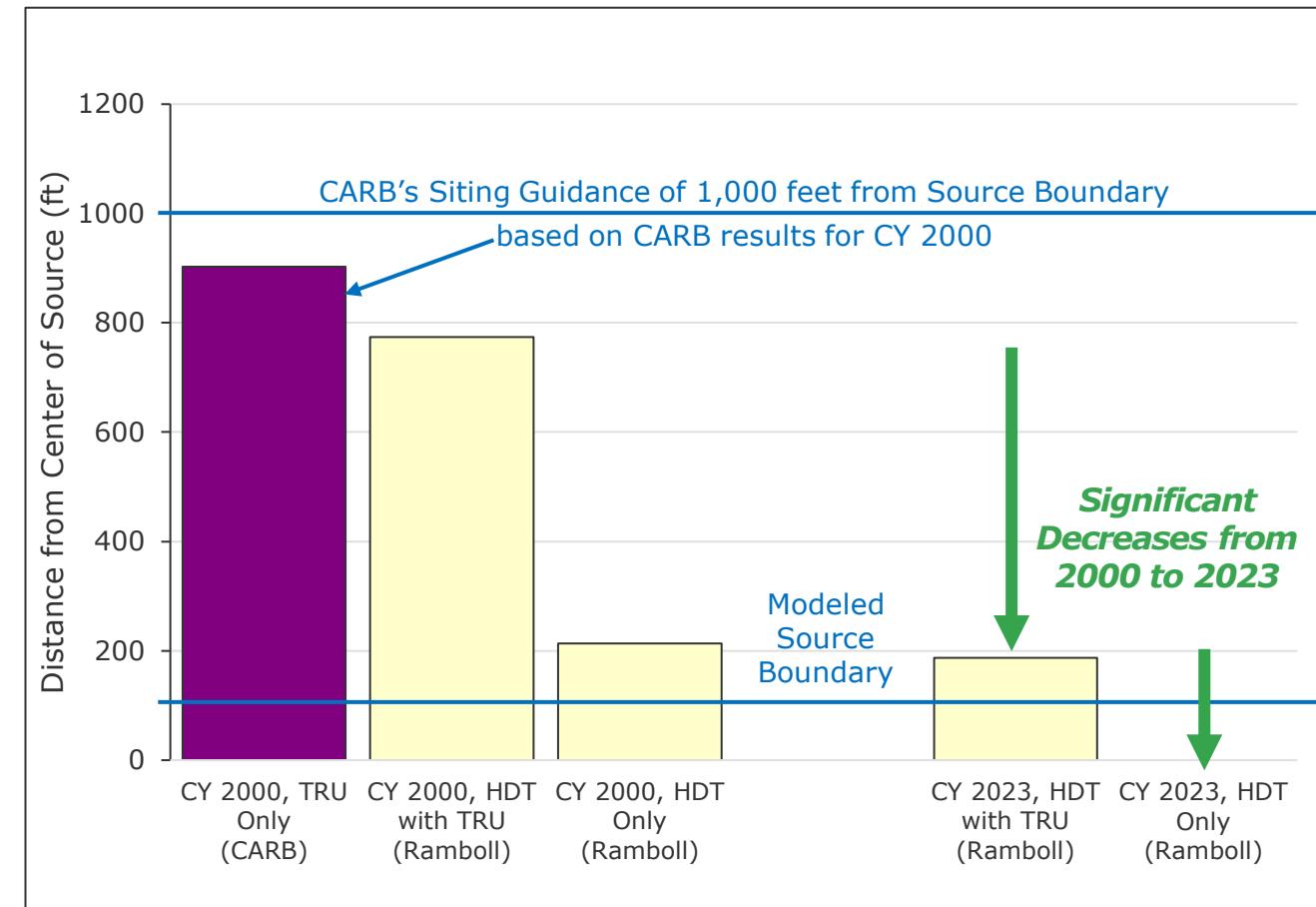
CANCER RISK VS. DISTANCE

Ramboll's Truck with TRU scenario results in CY 2000 similar to CARB results using older methodology.

With latest emission factors and methodology, **cancer risk estimates in CY 2023 and beyond are below 100-in-a-million** at most distances

CARB's minimum siting guidance of 1,000 ft for sensitive receptors located in the vicinity of warehouses **is now overly conservative and should be significantly reduced or eliminated**

Estimated ≥ 100 in a million risk range versus distance from center of source (CARB and Ramboll data)



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CEQA PROCESS OVERVIEW

The California Environmental Quality Act (CEQA) process **protects public health**. Potential projects must complete the following steps before receiving approval.

Evaluate Air Quality Impacts from Criteria Air Pollutants

Compare results to SCAQMD thresholds

Evaluate Other Air Quality Impacts

These include impacts from air toxics, odors, and greenhouse gases

Complete a Health Risk Assessment

Evaluate cancer risk, hazard indices, and compare to SCAQMD thresholds

Assess and Mitigate

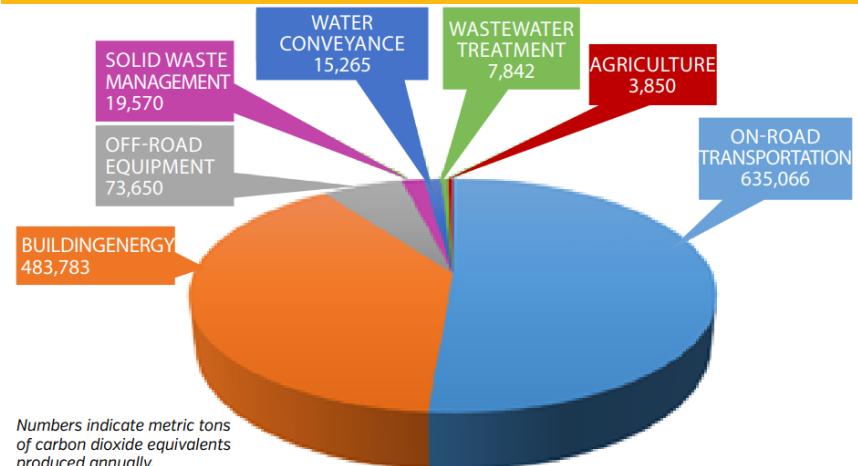
Projects may be required to include mitigation measures to reduce impact before being approved

The City of Fontana requires all new development projects comply with specific construction and operational mitigation measures.

CITY OF FONTANA – GOING FURTHER GENERAL PLAN UPDATE 2015-2035¹

GOALS	POLICIES
Fontana is a regional leader in sustainability and resilience with an effective “Sustainable Fontana” program.	<ul style="list-style-type: none"> Support establishment of a “Sustainable Fontana” program.
City government facilities and operations are models of resource efficiency.	<ul style="list-style-type: none"> Incorporate goals for resource efficiency in municipal facilities and operations into the City Code. Continue organizational and operational improvements to maximize energy and resource efficiency and reduce waste.
Renewable sources of energy, including solar and wind, and other energy-conservation strategies are available to city households and businesses.	<ul style="list-style-type: none"> Support measures that permit small-scale wind and solar installations and other renewable options with appropriate regulations.
Fontana meets the greenhouse gas reduction goals for 2030 and subsequent goals set by the state.	<ul style="list-style-type: none"> Continue to collaborate with SBCTA on greenhouse gas inventories and climate action planning.
Fontana is an Inland Empire leader in energy-efficient energy development and retrofits.	<ul style="list-style-type: none"> Promote energy-efficient development in Fontana. Meet state energy-efficiency goals for new construction.
Green building techniques are used in new development and retrofits.	<ul style="list-style-type: none"> Promote green building through guidelines, awards and nonfinancial incentives.
Conservation of water resources with best practices such as drought-tolerant plant species, recycled water, greywater systems, has become a way of life in Fontana.	<ul style="list-style-type: none"> Continue to promote and implement best practices to conserve water.

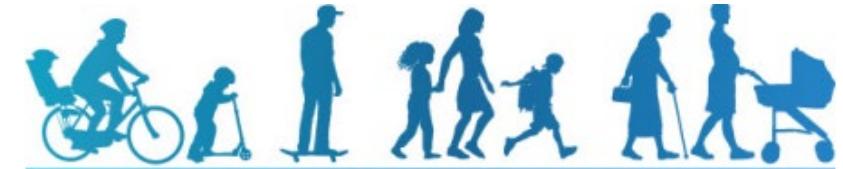
EXHIBIT 12.4 SOURCES OF GREENHOUSE GASES PRODUCED IN FONTANA



The Fontana **Zoning and Development Code² implements these goals and policies** listed in the General Plan.

City's Proposed Capital Improvement Program³ for 2021/2022 to 2027/2028 allocates **\$7.1 million for projects that improve energy efficiency** of City-owned facilities including a microgrid installation.

CITY OF FONTANA – GOING FURTHER ACTIVE TRANSPORTATION PLAN¹



Fontana **Active** Transportation Plan

Goal 1: Mobility & Access

Goal 2: Safety

Goal 3: Infrastructure & Support Facilities

Goal 4: Non-Infrastructure Programs

Goal 5: Equity

Goal 6: Implementation

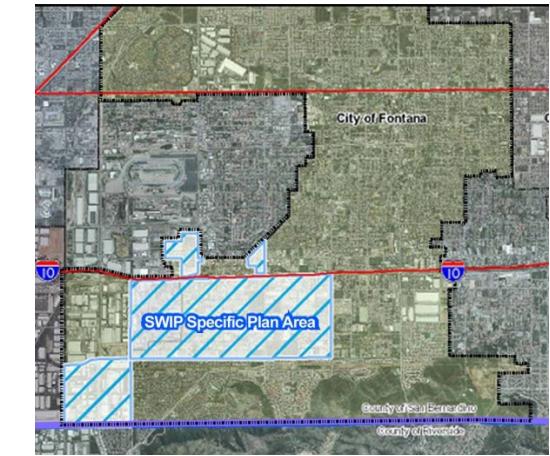
The Plan **defines specific objectives and policies** for each Goal.

City's Proposed Capital Improvement Program² for 2021/2022 to 2027/2028 **includes several infrastructure projects to achieve these goals** such as:

- Fontana Safe Routes To School Gap Closure
- San Sevaine Trail Phase I
- Metrolink Station Access Improvement
- Sidewalk Rehabilitation Project

CITY OF FONTANA – GOING FURTHER SOUTHWEST INDUSTRIAL PARK SPECIFIC PLAN

The Environmental Impact Report ([EIR](#)) for the Southwest Industrial Park Specific Plan was [approved in June 2012](#).¹



The City requires projects within the Southwest Park **larger than 350,000 square feet to perform additional environmental analyses** based on current methodologies

Construction Mitigation Measures² includes Tier 3/Tier 4 emission standards for construction equipment, dust control measures, and use low volatile organic compound (VOC) paints.

Operational Mitigation Measures² include specific measures to reduce in vehicle miles travelled (VMT), energy use, water use, and solid waste generation.

BUILDING ON SUCCESS

- General Plan – Potential Next Steps
 - Develop a monitoring plan that tracks the implementation of the air quality (AQ) improvement and greenhouse gas (GHG) reduction actions in General Plan
 - Periodically (every 5 years) review AQ/GHG goals and actions from the General Plan and provide recommendations for potential updates
 - Update the GHG Inventory every 5 years to track impacts of City's actions in reducing GHG emissions
- Active Transportation Plan – Potential Next Steps
 - Continued implementation tracking
 - Consult with Caltrans and San Bernardino County Transportation Authority (SBCTA) now and at 5-year intervals for latest action recommendations, if any
- Review and, if needed, update the standard conditions of approval and recommended mitigation measures for new development projects

THANK YOU

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REFERENCES

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¹ Left image shows a view of downtown Los Angeles from Hollywood in February 1995. Photo by Ron Eisenberg/Michael Ochs Archives/Getty Images. Available at: <https://www.gettyimages.com/detail/news-photo/view-of-downtown-from-hollywood-with-the-capitol-records-news-photo/669976430?et=3yDysGReSW5tUdC11P2igw&referrer=https%3A%2F%2Fwww.gettyimages.com%2F>.

² Right image shows a view of downtown Los Angeles in 2017. Photo by David McNew/Getty Images North America/Getty Images. Available at: <https://www.cnn.com/2017/02/15/architecture/downtown-la-revival/index.html>.

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¹ Ozone concentrations obtained from SCAQMD Air Quality Data Tables. Values shown are for the Central San Bernardino Valley 1 Monitoring Station. Available at: <https://www.aqmd.gov/docs/default-source/air-quality/historical-data-by-year/2019-air-quality-data-tables.pdf?sfvrsn=8>.

² Federal standards are NAAQS, as established by the EPA. Available at: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>

³ Ozone health effects as listed by EPA. Available at: <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>

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¹ NO₂ concentrations obtained from SCAQMD Air Quality Data Tables. Values shown are for the Central San Bernardino Valley 1 Monitoring Station. Available at: <https://www.aqmd.gov/docs/default-source/air-quality/historical-data-by-year/2019-air-quality-data-tables.pdf?sfvrsn=8>.

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³ NO₂ health effects as listed by EPA. Available at: <https://www.epa.gov/no2-pollution/basic-information-about-no2>

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¹ PM_{2.5} concentrations obtained from SCAQMD Air Quality Data Tables. Values shown are for the Central San Bernardino Valley 1 Monitoring Station. Available at: <https://www.aqmd.gov/docs/default-source/air-quality/historical-data-by-year/2019-air-quality-data-tables.pdf?sfvrsn=8>.

² Federal standards are NAAQS, as established by the EPA. Available at: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>

³ PM_{2.5} health effects as listed by EPA. Available at: <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>

⁴ Image of PM scale to human hair from EPA. Available at: https://www.epa.gov/sites/default/files/2016-09/pm2.5_scale_graphic-color_2.jpg

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¹ Speciated cancer risks for MATES II – MATES V obtained from Appendix IV of the MATES V Draft Report. Available at:

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² Total cancer risks as estimated in MATES II and MATES IV obtained from Section 2.7 of the MATES IV Final Report. Available at:

<http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf?sfvrsn=7>.

³ Total cancer risk as estimated in MATES III is from the draft MATES V interactive Air Toxics Trends dashboard. Value used is the total residential air toxic cancer risk at the Inland Valley San Bernardino Monitoring Station. Available at:

https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/home/?views=view_9%2Cview_38.

⁴ Total cancer risk as estimated in MATES V was obtained from the draft MATES V interactive Cancer Risk dashboard. Value used is the cancer risk at the Inland Valley San Bernardino Monitoring Station. Available at:

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⁵ Lifetime probability of developing cancer based on data in Table 6 of the American Cancer Society's Cancer Facts and Figures 2021 Summary Report. Available at: <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2021/cancer-facts-and-figures-2021.pdf>.

⁶ Image of MATES V Simulated Multi-Pathway Risk was obtained from Section 4.6 of MATES V Draft Report. Available at:

<http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-chapter-4---15april-345pm---footnote-version.pdf?sfvrsn=8>

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¹ CARB Truck and Bus Regulation. Available at: <https://ww2.arb.ca.gov/our-work/programs/truck-and-bus-regulation>.

² CARB Heavy-Duty Omnibus Regulation. Available at: <https://ww2.arb.ca.gov/rulemaking/2020/hdomnibuslownox>.

³ CARB Advanced Clean Trucks. Available at: <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks>.

⁴ CARB Innovative Clean Transit. Available at: <https://ww2.arb.ca.gov/our-work/programs/innovative-clean-transit>.

⁵ CARB Advanced Clean Cars Program. Available at: <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program>.

⁶ SCAQMD Rule 2305. Available at: <http://www.aqmd.gov/docs/default-source/rule-book/reg-xxiii/r2305.pdf?sfvrsn=15>.

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⁴ CARB In-Use Locomotive Regulation Draft Language. Available at: <https://ww2.arb.ca.gov/sites/default/files/2021-03/Draft%20Regulatory%20Language%2003.16.21.pdf>.

⁵ CARB In-Use Off-Road Diesel Fleet Regulation. Available at: <https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation/about>.

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⁷ CARB Transport Refrigeration Unit Regulation. Available at: <https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit/new-transport-refrigeration-unit-regulation>.

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¹ CARB 2005 Land Use Handbook. Available at: <https://ww3.arb.ca.gov/ch/handbook.pdf>.

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Slide 17

¹ Visuals from City of Fontana General Plan and Pie Chart data from 2015 – Chapter 12: Sustainability & Resilience. Available at:

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² City of Fontana Zoning and Development Code. Available at:

https://library.municode.com/ca/fontana/codes/zoning_and_development_code?nodeId=ZODECOFOCA.

³ City of Fontana Proposed Capital Improvement Program for Fiscal Years 2021/22 – 2027/28. Available at:

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¹ Visual and list of goals from Active Transportation Plan. Available at: <https://www.fontana.org/DocumentCenter/View/27009/ATP-Final-Report>

² City of Fontana Proposed Capital Improvement Program for Fiscal Years 2021/22 – 2027/28. Available at:

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¹ Southwest Industrial Park Specific Plan and visual used. Available at: <https://www.fontana.org/1297/Southwest-Industrial-Park-Specific-Plan>.

² Mitigation Monitoring and Reporting Program. Example of implementation of this program in Almond Commerce center available at:

<https://www.fontana.org/DocumentCenter/View/35954/Almond-Warehouse-Appendices>