ROCKLIN TRACTOR SUPPLY COMPANY PROJECT
AIR QUALITY STUDY

Prepared for:

California Gold Development Corporation

Prepared by:

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Project #1253-08

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EXECUTIVE SUMMARY

This *Executive Summary* is a brief overview of the analysis presented in this air quality study. It is not intended to be a comprehensive description of the analysis. For more details, the reader is referred to the full description presented in this study.

The Tractor Supply Company Project includes a 22,136 building square feet (sf) Tractor Supply Company store and an outdoor display area, and a 4,000 sf retail building. For this air quality study, the 4,000 sf retail building was analyzed as including 2,000 sf of retail commercial land use and a 2,000 sf fast food restaurant with a drive-through aisle.

The project site is located southwest of the intersection of Sunset Boulevard and Lonetree Boulevard, in the City of Rocklin, Placer County, CA.

This air quality study presents an evaluation of the construction-related and operational impacts of the proposed project on the air quality environment.

The project site is located within the Sacramento Valley Air Basin (SVAB). The SVAB portion of Placer County is designated a state and federal nonattainment area for ozone. The area is a state nonattainment area for inhalable particulate matter smaller than 10 microns in diameter (designated PM_{10}), and is a federal nonattainment area for fine particulate matter smaller than 2.5 microns in diameter ($PM_{2.5}$). The area is designated attainment or unclassified for carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_x), and lead.

Implementation of the Tractor Supply Company Project would result in the generation of short-term construction-related air pollutant emissions. The amount of project-related criteria pollutant emissions would be less than the significance thresholds and would, therefore, be considered to have a less-than-significant impact on air quality.

Air quality impacts due to long-term operation of the project were assessed by evaluating criteria pollutant emissions. Project-related emission levels would be less than the significance thresholds. Therefore, operation of the project is considered to have a less-than-significant impact on criteria pollutant air quality.

Screening-level analyses were performed to assess the project-related effect on CO concentrations. These analyses concluded that the project would not result in violations of the federal and state CO standards.

An assessment of the effects of the Tractor Supply Company Project on global climate change was conducted. The project-related change in greenhouse gas (GHG) emissions was quantified. The project is determined to have a less-than-significant impact on global climate change.

SECTION 1
INTRODUCTION

This air quality study has been prepared to assess the air quality impacts of the Rocklin Tractor Supply Company Project. This study contains information that will be used in the preparation of a California Environmental Quality Act (CEQA) environmental checklist for this project. The City of Rocklin is the CEQA lead agency for the project environmental review, and will prepare a CEQA environmental document for the project.

To facilitate incorporation of this document into the CEQA environmental checklist, this document is organized and formatted to be consistent with a CEQA *Environmental Checklist Form*, which is Appendix G of *State CEQA Guidelines* (Title 14 California Code of Regulations section 15000 et seq.).

This air quality study presents assessments of the localized air quality impacts of the proposed project, the impacts of the project on regional air quality, and construction-related impacts of the project.

Following this *Introduction* section, this air quality study presents a description of:

- the proposed project,
- the impacts of the project on air quality, and
- the impacts of the project on global climate change and greenhouse gases.

All modeling results are included in the *Technical Appendix* of this air quality study.

SECTION 2
PROJECT DESCRIPTION

The following is a description of the Rocklin Tractor Supply Company Project, based on information from the project site plan and Verceles pers. comm.

2.1 PROJECT LOCATION

The proposed Rocklin Tractor Supply Company Project is located southwest of the intersection of Sunset Boulevard and Lonetree Boulevard in the City of Rocklin, Placer County, CA. The northern corner of the project site is located approximately 275 feet southwest of the intersection. **Figure 1** presents an aerial photograph of the vicinity of the project site. **Figure 2** presents the project site plan.

2.2 PROJECT COMPONENTS

As shown in **Figure 2**, the Rocklin Tractor Supply Company Project includes a 22,136 sf Tractor Supply Company store and an outdoor display area, and a 4,000 sf retail building. For this air quality study, the 4,000 sf retail building was analyzed as including 2,000 sf of retail commercial land use and a 2,000 sf fast food restaurant with a drive-through aisle. The project also includes approximately 44,060 sf of asphalt-paved surface.

2.3 PROJECT CONSTRUCTION SCHEDULE

Construction of the Rocklin Tractor Supply Company Project is expected to begin in the summer of 2021 and be completed in the fall of 2021.

VICINITY MAP

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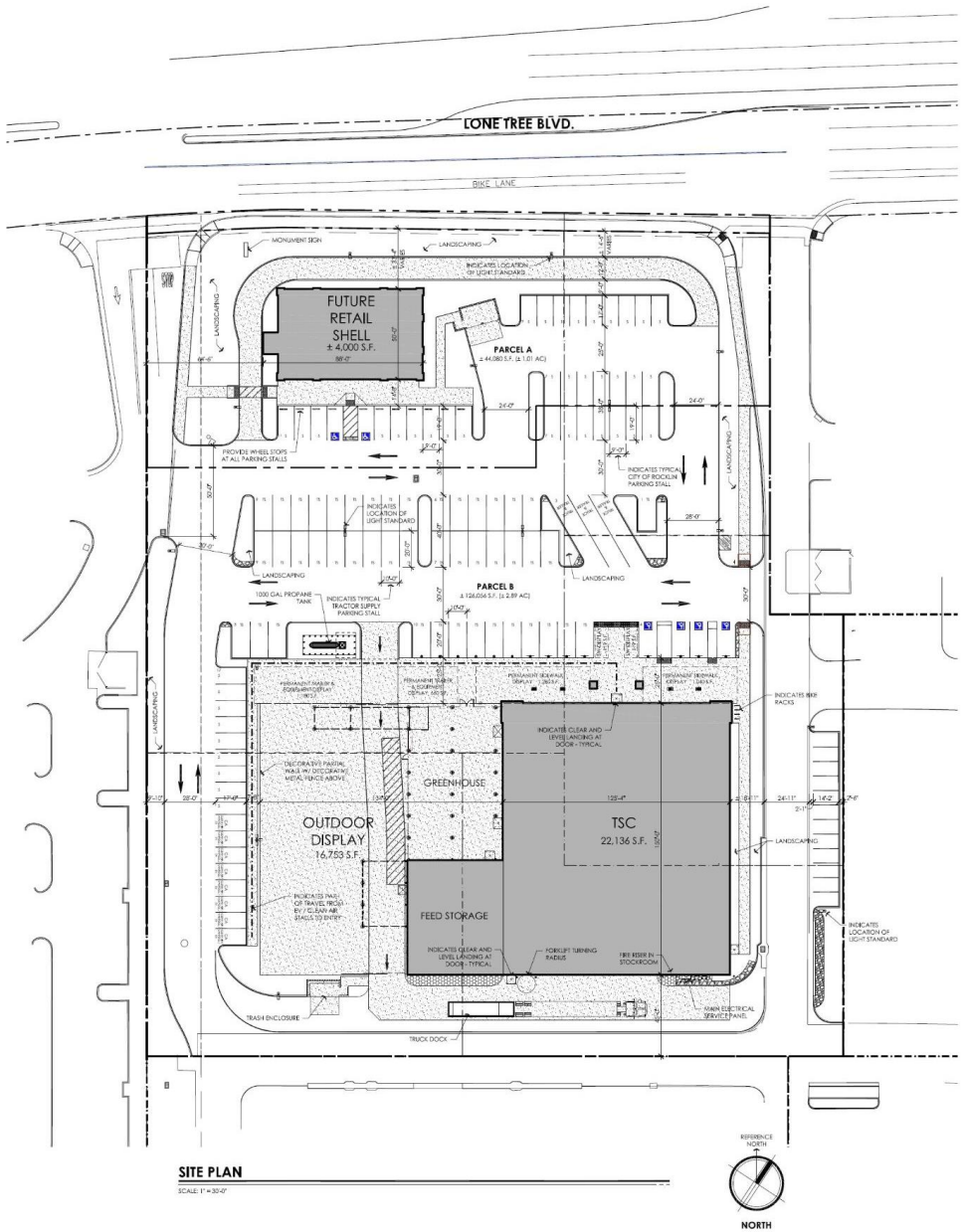
1253-08 RA 4/1/2021

figure 1



SITE PLAN

SCALE: 1" = 30'-0"

VICINITY MAP

LONE TREE BLVD.
ROCKLIN, CA 95765

PROJECT TEAM

DEVELOPER:
CALIFORNIA GOLD DEVELOPMENT CORPORATION
133 OLD WARDS FERRY ROAD
SONORA, CA 95370
(209) 533-3333
CONTACT: SCOT PATTERSON

ARCHITECT:
API
4335-B NORTH STAR WAY
MODESTO, CA 95356
(209) 577-4661
CONTACT: JOSEPH L. SMITH

BUILDING/PARKING DATA

PARCEL A:

RETAIL BUILDING	= 4,000 S.F.
RESTAURANT / FAST FOOD	= 2,000 S.F.
PARKING REQUIRED: RESTAURANT 1 SPACE PER 3 SEATS (49 SEATS)	= 16 STALLS
RETAIL SPACE	= 2,000 S.F.
PARKING REQUIRED: RETAIL 1 SPACE PER 250 SF	= 8 STALLS
TOTAL REQUIRED	= 24 STALLS
PARKING PROVIDED: CITY OF ROCKLIN STANDARD (S)	= 25 STALLS
HANDICAP	= 2 STALLS
TOTAL	= 27 STALLS
PARKING RATIO PROVIDED	= 1/148 S.F.

PARCEL B (TSC):

RETAIL BUILDING	= 22,136 S.F.
PARKING REQUIRED: RETAIL 1 SPACE PER 250 SF	= 88 STALLS
GREENHOUSE	= 4,445 S.F.
PARKING PROVIDED: TSC STANDARD (TS)	= 45 STALLS
CITY OF ROCKLIN STANDARD (S)	= 16 STALLS
COMPACT (CO)	= 12 STALLS
HANDICAP	= 4 STALLS
TRUCK & TRAILER	= 3 STALLS
CLEAN AIR/VAN POOL/EV	= 8 STALLS
TOTAL	= 88 STALLS
MOTORCYCLE PARKING	= 56 S.F.
PARKING RATIO PROVIDED	= 1/250 S.F.

DISPLAY AREAS

FENCED OUTDOOR DISPLAY	= 16,753 S.F.
PERMANENT SIDEWALK DISPLAY	= 2,638 S.F.
PERMANENT TRAILER & EQUIPMENT DISPLAY	= 1,840 S.F.
TOTAL DISPLAY AREA	= 21,131 S.F.

PROPOSED NEW DEVELOPMENT:

Tractor Supply Co.

Lone Tree Blvd.
Rocklin, CA.

PLANNING
ARCHITECTURE

api

ARCHITECTURE PLUS INC.
4335-B NORTH STAR WAY
MODESTO, CA 95356

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SHEET:
A1
OF 7

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SITE PLAN

figure 2

SECTION 3
AIR QUALITY

The following is the *Air Quality* portion of the CEQA *Environmental Checklist Form*. The checklist form is presented as Appendix G of the *State CEQA Guidelines* (Title 14 California Code of Regulations section 15000 et seq.).

III.	**AIR QUALITY** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	X	☐
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	X	☐
c.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	X	☐
d.	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	X	☐

As shown above, the *Air Quality* portion of the CEQA *Environmental Checklist Form* is presented as items III.a through III.d. A discussion of each of these items is presented below.

3.1 DISCUSSION OF ITEM III.a

The Rocklin Tractor Supply Company Project site is located in the jurisdiction of the Placer County Air Pollution Control District (PCAPCD). Portions of the PCAPCD area are within three air basins. The project site is within the SVAB portion of the PCAPCD.

The federal Clean Air Act (CAA) and the California Clean Air Act (CCAA) require that federal and State ambient air quality standards (AAQS) be established, respectively, for six common air pollutants, known as criteria pollutants. The criteria pollutants include particulate matter (PM), ground-level ozone, carbon monoxide (CO), sulfur oxides, nitrogen oxides (NO_x), and lead. At the federal level, the SVAB area is designated as nonattainment for the 8-hour ozone and the 24-hour PM 2.5 microns in diameter ($PM_{2.5}$) AAQS, and attainment or unclassified for all other federal criteria pollutant AAQS. At the State level, the SVAB area is designated as nonattainment for the 1-hour ozone, 8-hour ozone, and PM 10 microns in diameter (PM_{10}) AAQS, and attainment or unclassified for all other State AAQS.

The CAA requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The SIPs are modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies. Due to the nonattainment designations, PCAPCD, along with the other air districts in the SVAB region, periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the federal AAQS, including control strategies to reduce air pollutant emissions through regulations, incentive programs, public education, and partnerships with other agencies.

The current applicable air quality plan for the proposed project area is the *Sacramento Regional 2009 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (Ozone Attainment Plan), updated July 24, 2017. The Ozone Attainment Plan demonstrates how existing and new control strategies would provide the necessary future emission reductions to meet the CAA requirements, including the federal AAQS.

The Ozone Attainment Plan demonstrates how existing and new control strategies would provide the necessary future emission reductions to meet the CAA requirements, including the national AAQS. It should be noted that in addition to strengthening the 8-hour ozone national AAQS, the U.S. Environmental Protection Agency (USEPA) also strengthened the secondary 8-hour ozone national AAQS, making the secondary standard identical to the primary standard. The SVAB remains classified as a severe nonattainment area for ozone with an attainment deadline of 2027. On October 26, 2015, the USEPA released a final implementation rule for the revised national AAQS for ozone to address the requirements for reasonable further progress, modeling and attainment demonstrations, and reasonably available control measures (RACM) and reasonably available control technology (RACT). On April 30, 2018, the USEPA published designations for areas in attainment/unclassifiable for the 2015 ozone standards. The USEPA identified the portions of Placer County within the SVAB as nonattainment for the 2015 ozone standards. Due to the designation of the SVAB as nonattainment for the 2015 standards, the PCAPCD will work with other regional air districts to prepare a new ozone SIP for the revised 2015 standards.

General conformity requirements of the regional air quality plan include whether a project would cause or contribute to new violations of any AAQS, increase the frequency or severity of an existing violation of any AAQS, or delay timely attainment of any AAQS. To evaluate ozone and other criteria air pollutant emissions and support attainment goals for those pollutants that the area is designated nonattainment, the PCAPCD has adopted recommended thresholds of significance for emissions of PM_{10} and the ozone precursors reactive organic gases (ROG) and NO_x. Significance thresholds used in this air quality study are from the PCAPCD document *Placer County Air Pollution Control District Policy – Review of Land Use Projects Under CEQA* (Placer County Air Pollution Control District 2016a).

As the CEQA lead agency, the City of Rocklin uses the PCAPCD significance thresholds listed in **Table 1** as air quality standards in the evaluation of air quality impacts associated with proposed development projects. Thus, if the proposed project's emissions exceed the pollutant thresholds presented in **Table 1**, the project would be considered to have a potentially significant effect on regional air quality and the attainment of federal and State Ambient Air Quality Standards.

Implementation of the Rocklin Tractor Supply Company Project would contribute to increases of ROG, NO_x, and PM_{10} emissions in the study area. As specified in the PCAPCD document *CEQA Air Quality Handbook – Assessing and Mitigating Air Quality Impacts Under CEQA* (Placer County Air Pollution Control District 2017), short-term construction-related and long-term operational emissions associated with the project were estimated using the CalEEMod emissions modeling program (California Air Pollution Control Officers Association 2016). CalEEMod is a land use emissions computer model designed to provide a platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operation of a variety of land use projects. The model quantifies direct emissions from construction and operation (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.

More detailed information on the CalEEMod model is available at the internet website http://caleemod.com/. Output files from the CalEEMod model, as applied to the Rocklin Tractor Supply Company Project, are presented in the *Technical Appendix* of this air quality study.

The CalEEMod emissions model contains default data characterizing the construction and operation of land use development projects, such as the Rocklin Tractor Supply Company Project. The CalEEMod default values were used except where:

- project-specific data are available,
- updated technical data are available.

Project-specific data included the size of the proposed structures on the project site and the anticipated construction schedule (Verceles pers. comm.).

Table 1. Placer County Air Pollution Control District
Criteria Pollutant Significance Thresholds

Pollutant	Construction Phase Thresholds	Operational Phase Project-Level Thresholds	Operational Phase Cumulative-Level Thresholds
Reactive Organic Gases (ROG)	82	55	55
Nitrogen Oxides (NO_x)	82	55	55
Inhalable Particulate Matter (PM_{10})	82	82	82

Sources: Placer County Air Pollution Control District 2016a.

Note: All thresholds are expressed in pounds per day.

Updated technical data include use of vehicle trip generation rates for the Rocklin Tractor Supply Company Project from the Institute of Transportation Engineers (ITE) document *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers 2017), and a trip generation report prepared for the project (Anderson pers. comm.).

3.1.1 Construction Emissions

During construction of the Rocklin Tractor Supply Company Project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction workers' commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria air pollutants. Project construction activities also represent a source of fugitive dust, which includes PM emissions. As construction of the proposed project would generate air pollutant emissions intermittently within the site and the vicinity of the site, until all construction has been completed, construction is a potential concern because the proposed project is in a non-attainment area for ozone and PM.

The Rocklin Tractor Supply Company Project is required to comply with all PCAPCD rules and regulations for construction, including, but not limited to, the following, which would be noted with City-approved construction plans:

- Rule 202 related to visible emissions; Rule 217 related to asphalt paving materials; Rule 218 related to architectural coatings; Rule 228 related to fugitive dust, and Regulation 3 related to open burning.

The Rocklin Tractor Supply Company Project's maximum daily emissions from construction are shown in **Table 2**. As shown, the short-term construction-related emissions are not anticipated to exceed the PCAPCD's significance thresholds for emissions of ROG, NO_x, and PM_{10}. Therefore, construction activities associated with development of the project would not substantially contribute to the PCAPCD's nonattainment status for ozone and PM_{10}. Accordingly, construction of the proposed project would not violate any ambient air quality standards (AAQS) or contribute to an existing or projected air quality violation or conflict with or obstruct implementation of the applicable air quality plan. Therefore, the construction-related impacts of the Rocklin Tractor Supply Company Project for these pollutants are considered to be less than significant and no mitigation measures are required.

Table 2. Construction-Related Criteria Pollutant Emissions

Pollutant	Project-Related Emissions	Construction Phase Significance Thresholds	Significant Impact?
Reactive Organic Gases (ROG)	25.69	82	No
Nitrogen Oxides (NO_x)	42.28	82	No
Inhalable Particulate Matter (PM_{10})	6.63	82	No

Source: CalEEMod emissions model.
Thresholds from Placer County Air Pollution Control District 2021.

Notes: All values are expressed in pounds per day.
Values shown are maximums of all construction phases.
Values shown are the maximum of summer and winter values.

3.1.2 Operational Emissions

Operational emissions of ROG, NO_x and PM_{10} would be generated by the Rocklin Tractor Supply Company Project from both mobile and stationary sources. Day-to-day activities such as vehicle trips to and from the project site would make up the majority of the mobile emissions. Emissions would occur from stationary sources such as natural gas combustion from heating mechanisms, landscape maintenance equipment exhaust, and consumer products (e.g., deodorants, cleaning products, spray paint, etc.). The modeling performed for the project takes these factors into consideration.

The Rocklin Tractor Supply Company Project is required to comply with all PCAPCD rules and regulations, such as those listed previously for construction, as well as for operations.

The Rocklin Tractor Supply Company Project's maximum daily emissions from operation of the project are shown in **Table 3**. As shown, the project's operational emissions of ROG, NO_x and PM_{10} would be below the applicable PCAPCD thresholds of significance. Accordingly, the Rocklin Tractor Supply Company Project's operational emissions would not contribute to the PCAPCD's nonattainment status of ozone and PM, operations of the project would not violate an air quality standard or contribute to an existing or projected air quality violation and operationally-related impacts would be considered less than significant.

3.2 DISCUSSION OF ITEM III.b

Due to the dispersive nature and regional sourcing of air pollutants, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants, including ozone and PM, is a result of past and present development, and, thus, cumulative impacts related to these pollutants could be considered cumulatively significant.

The Rocklin Tractor Supply Company Project is part of a pattern of urbanization occurring in the greater Sacramento ozone nonattainment area. The growth and combined vehicle usage, and business activity within the nonattainment area from the project, in combination with other past, present, and reasonably foreseeable projects within Rocklin and surrounding areas, could either delay attainment of the standards or require the adoption of additional controls on existing and future air pollution sources to offset emission increases. Thus, the project could cumulatively contribute to regional air quality health effects through emissions of criteria and mobile source air pollutants.

The PCAPCD recommends using the region's existing attainment plans as a basis for analysis of cumulative emissions. If a project would interfere with an adopted attainment plan, the project would inhibit the future attainment of AAQS, and thus result in a cumulative impact. As discussed above, the PCAPCD's recommended thresholds of significance for ozone precursors and PM_{10} are based on attainment plans for the region. Thus, the PCAPCD concluded that if a project's ozone precursor and PM_{10} emissions would be greater than the PCAPCD's operational-level thresholds, the project could be expected to conflict with relevant attainment plans, and could result in a cumulatively considerable contribution to a significant cumulative impact.

Table 3. Operational Criteria Pollutant Emissions

Pollutant	Project-Related Emissions	Operational Phase Project-Level Significance Thresholds	Significant Impact?
Reactive Organic Gases (ROG)	3.45	55	No
Nitrogen Oxides (NO_x)	14.43	55	No
Inhalable Particulate Matter (PM_{10})	3.66	82	No

Source: CalEEMod emissions model.
Thresholds from Placer County Air Pollution Control District 2021.

Notes: All values are expressed in pounds per day.
Values shown are the maximum of summer and winter values.

The PCAPCD adopted cumulative thresholds of significance of 55 ppd for ROG and NO_x, and 82 ppd of PM_{10}, applied to project operational emissions. Although a cumulative threshold, the threshold is applied to project-level emissions. The daily increase in regional emissions from auto travel and area sources associated with the Rocklin Tractor Supply Company Project is shown for ROG, NO_x and PM_{10} in **Table 4**.

As shown in **Table 4**, operational emissions of ROG and NO_x would be less than 55 ppd, and operational emissions of PM_{10} would be less than 82 ppd, the PCAPCD cumulative thresholds of significance. Therefore, the cumulative impact associated with the project is considered to be less than significant and no mitigation measures are required.

3.3 DISCUSSION OF ITEM III.c

During short-term construction and long-term operation of the Rocklin Tractor Supply Company Project, project-related activities would generate ROG, NO_x, and PM_{10} emissions. Nearby off-site sensitive receptors would be exposed to these emissions. However, as described above in Sections 3.1 and 3.2, project-related emissions would be below significance thresholds established by the PCAPCD. Therefore, exposure of sensitive receptors to ROG, NO_x, and PM_{10} emissions is considered less than significant and no mitigation measures are required.

3.3.1 Roadway and Intersection Emissions (Operational Indirect Sources)

Concentrations of CO along roadways and particularly at intersections are associated with the number of vehicles and the level of traffic congestion. Slow-moving vehicles result in elevated concentrations of CO at sensitive receptors adjacent to the roadways. In suburban or urban areas, traffic congestion at intersections can result in elevated CO concentrations.

The PCAPCD document *CEQA Air Quality Handbook – Assessing and Mitigating Air Quality Impacts Under CEQA* (Placer County Air Pollution Control District 2017) presents a screening method for assessing the potential for violations of the CO air quality standards. The handbook states,

> "When a project's CO emissions from vehicle operation are more than 550 lbs/day and if either of the following scenarios is true for any intersection affected by the project traffic, the project should conduct a site-specific CO dispersion modeling analysis to evaluate the potential local CO emission impact at roadway intersections:
>
> - "A traffic study for the project indicates that the peak-hour LOS on one or more streets or at one or more intersections (both signalized and non-signalized) in the project vicinity will be degraded from an acceptable LOS (e.g., A, B, C, or D) to an unacceptable LOS (e.g., E or F); or

Table 4. Operational Cumulative-Level Criteria Pollutant Emissions

Pollutant	Project-Related Emissions	Operational Phase Cumulative-Level Thresholds	Exceeds Cumulative Thresholds?
Reactive Organic Gases (ROG)	3.45	55	No
Nitrogen Oxides (NO_x)	14.26	55	No
Inhalable Particulate Matter (PM_{10})	3.66	82	No

Source: CalEEMod emissions model.
Thresholds from Placer County Air Pollution Control District 2021.

Notes: All values are expressed in pounds per day.
All values shown are summer (ozone season) values.

- "A traffic study indicates that the project will substantially worsen an already existing unacceptable peak-hour LOS on one or more streets or at one or more intersections in the project vicinity. 'Substantially worsen' includes situations where a delay would increase by 10 seconds or more when project-generated traffic is included.

"If a project is identified to have potential CO impacts, for any intersection affected by the project which already has traffic mitigation incorporated, the District would recommend the applicant/consultant conduct a CO dispersion modeling analysis using the CALINE-4 dispersion model to identify potential CO concentrations at the impacted street(s) or intersection(s)."

In this air quality study, if a project does not meet the PCPAPCD screening thresholds for CO emissions the project will be considered to have a less than significant impact on CO emissions.

Implementation of the Rocklin Tractor Supply Company Project would generate CO emissions in the study area. Long-term operational emissions associated with the project were estimated using the CalEEMod emissions modeling program (California Air Pollution Control Officers Association 2016).

Operation of the Proposed Project would generate 19.73 ppd of CO. The generation of CO emissions by the Proposed Project would be less than the PCAPCD 550 ppd screening threshold. Therefore, this impact is considered less than significant, and no mitigation measures are required.

3.4 DISCUSSION OF ITEM III.d

Odors are generally regarded as an annoyance rather than a health hazard. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative methodologies to determine the presence of a significant odor impact do not exist. Certain land uses such as wastewater treatment facilities, landfills, confined animal facilities, composting operations, food manufacturing plants, refineries, and chemical plants have the potential to generate considerable odors. The Rocklin Tractor Supply Company Project does not involve such land uses nor is it located near any such land uses.

Diesel fumes associated with diesel-fueled equipment and heavy-duty trucks, such as from construction activities or operations of emergency generators, could be found to be objectionable. However, construction is temporary and construction equipment would operate intermittently throughout the course of a day and would likely only occur over portions of the project area at a time.

In addition, PCAPCD Rule 205, Nuisance, addresses the exposure of "nuisance or annoyance" air contaminant discharges, including odors, and provides enforcement of odor control. Rule 205 is complaint-based, where if public complaints are sufficient to cause the odor source to be a public nuisance, then the PCAPCD is required to investigate the identified source as well as determine an acceptable solution for the source of the complaint, which could include operational modifications to correct the nuisance condition. Thus, although not anticipated, if odor or air quality complaints are made upon the proposed project, the PCAPCD would be required to ensure that such complaints are addressed and mitigated, as necessary.

For the reasons described above, the Rocklin Tractor Supply Company Project is not considered to result in odor emissions that would adversely affect a substantial number of people. As a result, this impact is considered less than significant and no mitigation measures are required.

SECTION 4
GREENHOUSE GAS EMISSIONS

The following is the *Greenhouse Gas Emissions* portion of the CEQA *Environmental Checklist Form*. The checklist form is presented as Appendix G of the *State CEQA Guidelines* (Title 14 California Code of Regulations section 15000 et seq.).

VII.	**GREENHOUSE GAS EMISSIONS** Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	**X**	☐
b.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	**X**	☐

As shown above, the *Greenhouse Gas Emissions* portion of the CEQA *Environmental Checklist Form* is presented as items VII.a and VII.b. The assessment of these items is described below.

4.1 DISCUSSION OF ITEMS VII.a AND VII.b

Gases that trap heat in the atmosphere are referred to as greenhouse gas (GHG) emissions because they capture heat radiated from the sun as it is reflected back into the atmosphere, similar to a greenhouse. The accumulation of GHG emissions has been implicated as a driving force for global climate change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and the impact of human activities that alter the composition of the global atmosphere.

Emissions of GHG contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential and agricultural sectors. Therefore, the cumulative global emission of GHGs contributing to global

climate change can be attributed to every nation, region, city and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

The major concern is that increases in GHG emissions are causing global climate change. Global climate change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the speed of global warming and the extent of the impacts attributable to human activities, the vast majority of the scientific community now agrees that there is a direct link between increased GHG emissions and long term global temperature increases. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, more drought years, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. In California, GHGs are defined to include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), nitrogen trifluoride (NF_3), and hydrofluorocarbons. To account for the warming potential of GHGs, GHG emissions are quantified and reported as CO_2 equivalents (CO_2e).

An individual project, even a very large project, does not in itself generate enough greenhouse gas emissions to measurably influence global climate change. Global climate change is therefore by definition a cumulative impact. A project contributes to this potential cumulative impact through its cumulative incremental contribution combined with the emissions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064 (h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared to with the effects of past, current and probable future projects. To gather sufficient information on a global scale of all past, current, and probable future projects to make this determination is a difficult, if not impossible, task.

Implementation of the proposed project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to development would be primarily associated with increases of CO_2 and, to a lesser extent, other GHG pollutants such as CH_4 and N_2O associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e/yr$).

In recognition of the global scale of climate change, California has enacted several pieces of legislation in attempt to curb GHG emissions. Specifically, Assembly Bill (AB) 32 and more recently, Senate Bill (SB) 32, have established statewide GHG emissions reduction targets. Accordingly, the California Air Resources Board (CARB) has prepared the Climate Change Scoping Plan for California (Scoping Plan), approved in 2008 and updated in 2014 and 2017, which provides the outline for actions to reduce California's GHG emissions and achieve the

emissions reductions targets required by AB 32 and SB 32. In concert with statewide efforts to reduce GHG emissions, air districts, counties, and local jurisdictions throughout the State have implemented their own policies and plans to achieve emissions reductions in line with the Scoping Plan and emissions reduction targets, including AB 32 and SB 32.

On October 13, 2016 the PCAPCD adopted GHG emissions thresholds to help the district attain the GHG reduction goals established by AB 32 and SB 32. These thresholds are shown in **Table 5**. The updated thresholds specify a bright-line threshold for GHG emissions during construction activity of 10,000 $MTCO_2e$/yr. For operational emissions, the updated thresholds begin with a screening emission level of 1,100 MT CO_2e/yr. Any project below the 1,100 MT CO_2e/yr threshold is judged by the PCAPCD as having a less than significant impact on GHG emissions within the District and thus would not conflict with any state or regional GHG emissions reduction goals. Projects that would result in emissions above the 1,100 MT CO_2e/yr threshold would not necessarily result in substantial impacts, if certain efficiency thresholds are met. The efficiency thresholds, which are based on service populations and square footage, are also shown in **Table 5**.

Projects that fall below the 1,100 MT CO_2e/yr threshold or meet the efficiency thresholds are considered to be in keeping with statewide GHG emissions reduction targets, which would ensure that the proposed project would not inhibit the State's achievement of GHG emissions reductions. Thus, projects which involve emissions below the 1,100 MT CO_2e/yr threshold or below the efficiency thresholds presented in **Table 5** are considered to result in less-than-significant impacts in regards GHG emissions within the District and would not conflict with any state or regional GHG emissions reduction goals.

The proposed project's short-term construction-related and long-term operational GHG emissions were estimated using the CalEEMod software (California Air Pollution Control Officers Association 2016). CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO_2 equivalent units of measure (MT CO_2e).

Implementation of the Rocklin Tractor Supply Company Project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to development would be primarily associated with increases of CO_2 and, to a lesser extent, other GHG pollutants, such as CH_4 and N_2O associated with mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. Because the project would involve increased vehicle use in the area, the GHG emissions related to increased vehicle use in the area must be analyzed.

The Rocklin Tractor Supply Company Project would result in short-term construction and long-term operational activities that would generate greenhouse gas emissions.

Table 5.
Placer County Air Pollution Control District
Greenhouse Gas Significance Thresholds

Greenhouse Gas Thresholds			
Bright-line Threshold **10,000** MT CO2e/yr			
Efficiency Matrix			
Residential		**Non-residential**	
Urban	**Rural**	**Urban**	**Rural**
(MT CO2e/capita)		(MT CO2e/1,000sf)	
4.5	**5.5**	**26.5**	**27.3**
De Minimis Level **1,100** MT CO2e/yr			

Source: Placer County Air Pollution Control District 2021.

4.1.1 Short-Term GHG Emissions

As shown in **Table 6**, short-term emissions of GHG associated with construction of the Rocklin Tractor Supply Company Project are estimated to be 191.27 $MTCO_2e$, which is below the PCAPCD's Bright Line Threshold of 10,000 $MTCO_2e$/year. Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. Due to the size of the proposed project, the project's estimated construction-related GHG contribution to global climate change would be considered not substantial on the overall global emissions scale.

4.1.2 Long-Term GHG Emissions

The long-term operational GHG emissions estimate for the Rocklin Tractor Supply Company Project incorporates the project's potential area source and vehicle emissions, emissions associated with utility and water usage, and the generation of wastewater and solid waste. As shown in **Table 6**, the annual GHG emissions associated with the proposed project would be 933.77 $MTCO_2e$/year which would be less than the PCAPCD 1,100 $MTCO_2e$ significance threshold.

Because the Rocklin Tractor Supply Company Project's construction emissions would be below the 10,000 $MTCO_2e$/year significance threshold and the operational GHG emissions would be below the screening emission level of 1,100 MT CO_2e/yr, the proposed project would not hinder the State's ability to reach the GHG reduction target nor conflict with any applicable plan, policy, or regulation for the purpose of reducing emissions of GHGs and the impact of the proposed project on global climate change would not be cumulatively considerable and therefore would be considered less than significant.

Table 6. Greenhouse Gas Emissions

Emissions Category	Carbon Dioxide (CO_2)	Methane (CH_4)	Nitrous Oxide (N_2O)	Carbon Dioxide Equivalent (CO_2e)
Construction-Related Emissions				
2019 Construction Emissions	190.44	0.03	0.00	191.27
Operational Emissions				
Area Source	0.00	0.00	0.00	0.00
Energy	60.68	0.01	0.00	61.26
Mobile Source	730.43	0.04	0.00	731.54
Waste	54.94	3.25	0.00	136.11
Water	2.34	0.08	0.00	4.86
Total Operational Emissions	848.40	3.37	0.00	933.77

Source: Emissions values are from the CalEEMod Emissions Model (http:/www/caleemod.com)
Notes: All values are in metric tons per year (MT/yr).
Total may not equal sum of components due to rounding.

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TECHNICAL APPENDIX

CalEEMod MODEL OUTPUT FILES

(presented in a separate electronic file)