HELIX Environmental Planning

County of San Diego Integrated Vector Management Program

Greenhouse Gas Emissions Technical Report

November 2021 | 00187.00005.024 (CSD-05.24)

Prepared for:

County of San Diego
Department of Environmental Health
Vector Control Program
5570 Overland Avenue, Suite 102
San Diego, CA 92123

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
BMPs	best management practices
CAA	Clean Air Act (Federal)
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emission Estimator Model
CalEPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CDPH	California Department of Public Health
CEQA	California Environmental Quality Act
CFCs	chlorofluorocarbons
CH_4	methane
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of San Diego
CPA	Community Planning Area
DEH	Department of Environmental Health
EO	Executive Order
EPIC	Energy Policy Initiative Center
°F	degrees Fahrenheit
GHG	greenhouse gas
GWP	global warming potential
HFCs	hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
IVMP	Integrated Vector Management Program
LCFS	Low Carbon Fuel Standard
MMT	million metric tons
mpg	miles per gallon
MT	metric ton

ACRONYMS AND ABBREVIATIONS (cont.)

N_2O	nitrous oxide
NASA	National Aeronautics and Space Administration
NHTSA	National Highway Traffic Safety Administration
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
PFCs	perfluorocarbons
ppm	parts per million
SANDAG	San Diego Association of Governments
SB	Senate Bill
SF_6	sulfur hexafluoride
VCP	Vector Control Program
VMT	vehicle miles traveled
USEPA	U.S. Environmental Protection Agency
WRI	World Resource Institute
ZEV	zero emissions vehicle

EXECUTIVE SUMMARY

This report evaluates the potential greenhouse gas (GHG) emission impacts associated with the proposed County of San Diego (County) Department of Environmental Health (DEH), Vector Control Program's (VCP) Integrated Vector Management Program (IVMP; Proposed Project). An estimate of the GHG emissions that would occur as a result of the Proposed Project implementation is provided. The IVMP carries out a full range of vector control activities, practices, and procedures to protect the public from vector-borne diseases and public nuisances while simultaneously protecting the environment. For the purposes of this analysis, the Proposed Project is the ongoing implementation of the IVMP, which would continue to comprehensively approach vector control through various techniques, including surveillance and monitoring, source reduction (i.e., physical control), source treatment (i.e., biological and chemical controls), public education and outreach, and disease diagnostics. The IVMP is managed by County staff, governed by the County Board of Supervisors, and implemented within a service area that includes all unincorporated areas within the county, as well as the 18 incorporated cities.

The Proposed Project would result in emissions of GHGs. Operation of on-road fleet vehicles, watercraft, aircraft, portable equipment, and small equipment associated with surveillance and monitoring, source reduction, and source treatment activities would result in emissions of GHGs from engine exhaust during IVMP implementation. However, implementation of the IVMP would result in annual emissions of 285 metric tons (MT) of carbon dioxide equivalents (CO_2e) per year, which is less than the threshold being applied to the Proposed Project, and therefore would result in less than significant impacts.

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1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

HELIX Environmental Planning, Inc. (HELIX) has completed this greenhouse gas (GHG) emissions technical report for the County of San Diego (County) Department of Environmental Health (DEH) Integrated Vector Management Program (IVMP; Proposed Project). The County DEH Vector Control Program (VCP) is a public health program that was established to monitor and control vectors that transmit diseases and create public nuisances within the county. For the purposes of the Proposed Project, a vector is defined as any animal capable of spreading disease or producing human discomfort or injury, including, but not limited to, mosquitoes, flies, mites, ticks, other arthropods, and rodents and other vertebrates (California Health and Safety Code Section 2002[k]).

The VCP is managed by County staff, governed by the County Board of Supervisors, and implemented within a service area that includes all 18 incorporated cities and unincorporated areas of San Diego County. The VCP serves to reduce exposure to vectors and vector-borne diseases in a manner that minimizes risks to people, property, and the environment through a coordinated set of activities collectively known as the IVMP. The IVMP carries out a full range of vector control activities, practices, and procedures to protect the public from vector-borne diseases and public nuisances while allowing for the inclusion of progressive and emerging vector control techniques, tools, and materials. For the purposes of this analysis, the Proposed Project consists of the ongoing implementation of the IVMP.

This report analyzes the significance of the IVMP's potential contribution of GHG emissions to statewide GHG emissions and GHG emissions reduction targets.

1.2 PROJECT LOCATION AND DESCRIPTION

1.2.1 Project Location

The IVMP service area is defined by the boundaries of San Diego County (Figure 1, *Regional Map*; Figure 2, *Integrated Vector Management Program Service Area*). The county is bordered by Orange and Riverside counties to the north, Imperial County to the east, the Pacific Ocean to the west, and the U.S./Mexico International Border to the south. The service area encompasses approximately 4,261 square miles, and includes all unincorporated area within the county, as well as the 18 incorporated cities (Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, and Vista). The unincorporated portion of the county is divided into 23 planning areas. Fourteen of the planning areas are referred to as Community Planning Areas (CPAs) and nine areas are called Subregional Planning Areas (Subregions). The CPAs are Alpine, Bonsall, County Islands, Fallbrook, Julian, Lakeside, Pendleton/De Luz, Rainbow, Ramona, San Dieguito, Spring Valley, Sweetwater, Valle de Oro, and Valley Center. The nine Subregions are Central Mountain, Crest/Dehesa/Harbison Canyon/Granite Hills, Desert, Jamul/Dulzura, Mountain Empire, North County Metropolitan (Metro), North Mountain, Otay, and Pala/Pauma Valley. The location and extent of specific activities implemented under the IVMP are evaluated based on the site-specific situation and dictated by the targeted vector, regulatory requirements, and applicable management approaches.

1.2.2 Project Description

Under the Proposed Project, the IVMP would continue to comprehensively implement vector control through various techniques, including surveillance and monitoring, source reduction (i.e., physical control), source treatment (i.e., biological and chemical controls), public education and outreach, and disease diagnostics. Each of these techniques would be applied to the applicable vectors under the IVMP, including disease-transmitting mosquitoes (i.e., Culex spp., Aedes spp., and *Anopheles* spp.); nuisance mosquitoes (i.e., not disease-transmitting); vectors associated with mammalian disease reservoirs (i.e., ticks and rodents); and other nuisance species (e.g., eye gnats not on commercial organic farms) deemed necessary for control as approved by the VCP. The five core services of the IVMP include: (1) early detection of public health risks through comprehensive vector surveillance and testing; (2) control and reduction of vectors that transmit diseases to humans or create public nuisance; (3) dissemination of information regarding tools for prevention, protection, and reporting of vectors that transmit diseases; (4) appropriate and timely response to vector-related customer complaints; and (5) detection of vector-borne pathogens. The objectives of the IVMP are to:

1. Protect public health, well-being, and economic effects from vectors throughout San Diego County by applying integrated vector management practices.

2. Implement effective and efficient integrated vector management practices in a manner that balances environmental impacts with the need to protect the public from vector-borne diseases and nuisances.

3. Coordinate with other regional vector control districts throughout California as well as State and federal public health and environmental protection agencies to allow for the inclusion of progressive and emerging vector control activities and technologies.

Vector control and surveillance activities are conducted by VCP staff under standard operating procedures and use a risk-based approach to determine appropriate levels of response to each vector of concern. The IVMP incorporates various vector management principles and techniques from guidance documents that are regularly updated, such as the VCP's annual *Mosquito, Vector and Disease Control Assessment Engineer's Report* (hereafter referred to as Engineer's Report); *West Nile Virus Strategic Response Plan*; and *Aedes Transmitted Disease Strategic Response Plan* (County 2020, 2018a and 2018b, respectively), as well as procedural documents such as the *Mosquito Breeding Site Access Standard Operating Procedure* (County 2014). A general discussion of the key IVMP activities is discussed below.

Surveillance and Monitoring

Vector surveillance, monitoring, and diagnostics are needed to assess location and abundance of vector populations and species so that data-informed decisions can be made. Vector surveillance involves monitoring vector populations and habitat, their disease pathogens, and human/vector interactions. Vector surveillance provides the VCP with valuable information about which vector species are present or likely to occur, locations in which they may occur, abundance, and if they are carrying disease(s). The information obtained from surveillance is evaluated against treatment and risk-based response criteria to decide when and where to implement vector control measures, and to help form action plans that can also assist in reducing the risk of contracting disease or causing nuisance. Vector surveillance can help minimize the area to which control techniques may be applied by directing activities to the areas where they are needed.

The VCP monitors disease-carrying animals such as mosquitoes, ticks, and rodents, as well as other pests including flies on commercial poultry ranches, within the IVMP service area. Monitoring includes such techniques as setting traps to determine abundance and species of mosquitoes; testing mosquitoes for presence of disease; collecting and testing dead birds for West Nile virus; and conducting surveys via ground vehicles, aircraft (including piloted and unmanned), watercraft, and remote sensing equipment to evaluate mosquito-breeding sources. Surveillance is also conducted for ticks and rodents.

The VCP operates the Vector Disease and Diagnostic Laboratory that provides diagnostic testing to support the VCP, which helps in the evaluation of public health risk and appropriate responses and treatments. The VCP tests vector specimens from the field for numerous diseases that could be a risk to public health.

Source Reduction

Source reduction (i.e., environmental modification) techniques are used to reduce vector-breeding sources such as habitat and other areas of harborage. Source reduction primarily involves physical control techniques that eliminate or reduce standing water including, but not limited to, ground disturbance (e.g., grading), vegetation management (including physical removal and/or herbicide application), water control, and other maintenance activities. Trapping and removal of vectors is also a form of source reduction.

Source Treatment

Source treatment includes biological and chemical controls of vectors. Specifically, this includes the use of mosquito fish (*Gambusia affinis*) and application of pesticides, such as larvicides and adulticides to reduce larval and adult mosquito populations, respectively. The type and location of biological and chemical control vary based on different factors, including, but not limited to, the vector species and growth stage, environment, disease presence, and risk level to public health. Any pesticides applied within waterbodies defined by federal and state regulations as Waters of the U.S. and/or State are conducted in accordance with the Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Biological and Residual Pesticide Discharges to Waters of the U.S. from Vector Control Applications (Order No. 2016-0039-DWQ, General Permit No. CA990004). Methods of application include, but are not limited to, backpack applicators, truck-mounted equipment, or other motorized vehicles (e.g., piloted and unmanned aircraft, watercraft). Source treatment of non-mosquito vectors can include, but are not limited to, chemical controls applied to mammal vectors such as rodents and mammal-related disease carriers such as ticks, fleas, and other arthropods. When pesticides are applied, label requirements are followed by VCP staff.

Public Education and Outreach

VCP staff conduct public education and outreach activities to increase public awareness of steps to prevent and protect against disease-carrying vectors. VCP staff distribute educational materials, provide informational displays and presentations, use social media and informational emails, and conduct media campaigns to provide the public with this knowledge.

Emerging Vector Control Strategies

Vector management strategies are updated as new information becomes available and are adapted and applied to new or emerging vectors as they arise. All vector control methods are based on empirical

data, scientific evidence, published research, current state and federal guidelines, expert guidance, and the VCP's experience conducting vector control activities. The IVMP integrates progressive and emerging vector control activities and materials established in coordination with other regional vector control districts and research institutions throughout California, as well as state and federal agencies, such as the California Department of Public Health, California Environmental Protection Agency (CalEPA), the U.S. Environmental Protection Agency (USEPA), and the Centers for Disease Control and Prevention (CDC). Emerging vector control strategies that may be implemented to address future public health risks and public nuisances could include, but not be limited to, increased or early source prevention and/or reduction, surveillance, or physical/biological/chemical controls, depending on the assessment.

1.3 BEST MANAGEMENT PRACTICES

The IVMP follows the best management practices (BMPs) described in State guidance documents, such as the *Best Management Practices for Mosquito Control in California* (California Department of Public Health [CDPH]; 2012), *Best Management Practices for Mosquito Control on California State Properties* (CDPH 2008), and *California Mosquito-Borne Virus Surveillance and Response Plan* (CDPH 2020), which detail vector control and pesticide application procedures. In addition, the County integrates BMPs into the IVMP serving as a comprehensive management framework for implementation of individual activities. BMPs implemented as part of the IVMP demonstrate the County's commitment to avoid or minimize impacts to the maximum extent feasible. The following BMPs will be implemented to reduce GHG emissions:

- Vehicles will only be driven on existing roadways, access roads, and existing unpaved access paths. Vehicles driven on levees to travel near aquatic areas (such as tidal marshes, sloughs, or channels) for surveillance or treatment activities will travel at speeds slow enough to avoid or minimize noise and the production of dust, typically 15 miles per hour or less.

- Engine idling times will be minimized by shutting off equipment and vehicles when not in use to the extent feasible.

- Vehicles and equipment will be maintained in accordance with manufacturer's specifications, including mufflers, engine operation, and tire inflation pressure to minimize rolling resistance.

- Vegetation trimming or removal, when necessary to provide access to vector habitat for surveillance and control activities, will be conducted by hand using handheld tools rather than gas-powered equipment or heavy machinery to minimize negative environmental effects.

- Where heavy equipment or machinery are necessary, measures will be taken, such as reducing turns by track-type vehicles, taking a minimum number of passes with equipment, identifying multiple points of entry, driving vehicles at low speed, and avoiding or minimizing operating on open mud and other soft areas.

In addition to the aforementioned BMPs, the County also engages in other environmental-friendly practices that further reduce potential air quality emissions, such as:

- The VCP assigns geographic locations, defined by continuous census tracts, to individual Certified Vector Control Technicians. Each geographic location is referred to as a 'district'. Work is assigned to each district, which defines the routine work area for Certified Vector Control

Technicians within a specific geographic area, thereby reducing mileage driven, which reduces fuel consumption and vehicle emissions.

- Certified Vector Control Technicians use mobile phones to call customers and to access the County-produced Vector Mobile App. Real-time access to new work requests while in the field allows Certified Vector Control Technicians to conduct and complete additional work while remaining in the geographic area. When they are able to complete new work assignments while remaining in the current area, this eliminates the need to return at a later time, thereby reducing mileage driven, which reduces fuel consumption and vehicle emissions.

2.0 EXISTING CONDITIONS

2.1 ENVIRONMENTAL SETTING

2.1.1 Understanding Global Climate Change

Global climate change refers to changes in average climatic conditions on Earth, as a whole, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting light in but preventing heat from escaping, thus warming the Earth's atmosphere. These gases allow solar radiation (sunlight) into the Earth's atmosphere but prevent radiative heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition.

The temperature record shows a decades-long trend of warming, with 2016 global surface temperatures ranking as the warmest year on record since 1880 (National Aeronautics and Space Administration [NASA] 2018). The newest release in long-term warming trends announced 2017 ranked as the second warmest year with an increase of 1.62 degrees Fahrenheit (°F) compared to the 1951-1980 average (NASA 2018). GHG emissions from human activities are the most significant driver of observed climate change since the mid-20th century (United Nations Intergovernmental Panel on Climate Change [IPCC] 2013). The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The statistical models show a "high confidence" that temperature increase caused by anthropogenic GHG emissions could be kept to less than two degrees Celsius relative to pre-industrial levels if atmospheric concentrations are stabilized at about 450 parts per million (ppm) carbon dioxide equivalent (CO_2e) by the year 2100 (IPCC 2014).

2.1.2 Greenhouse Gases of Primary Concern

The GHGs, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Although water vapor is the most abundant and variable GHG in the atmosphere, it is not considered a pollutant; it maintains a climate necessary for life.

Carbon Dioxide. CO_2 is the most important and common anthropogenic GHG. CO_2 is an odorless, colorless GHG. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungi; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of CO_2 include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. The atmospheric CO_2 concentration in 2010 was 390 ppm, 39 percent above the concentration at the start of the Industrial Revolution (about 280 ppm in 1750). As of April 2020, the CO_2 concentration exceeded 413 ppm, a 46 percent increase since 1750 (National Oceanic and Atmospheric Administration [NOAA] 2020).

Methane. CH_4 is a gas and is the main component of natural gas used in homes. A natural source of methane is from the decay of organic matter. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from decay of organic material in landfills, fermentation of manure, and cattle digestion.

Nitrous Oxide. N_2O is produced by both natural and human-related sources. N_2O is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic (fatty) acid production, and nitric acid production.

Fluorocarbons. Fluorocarbons are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol.

Sulfur Hexafluoride. SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.

GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHGs to disperse around the globe. Because GHGs vary widely in the power of their climatic effects, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, because methane and N_2O are approximately 25 and 298 times more powerful than CO_2, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO_2 has a GWP of 1). CO_2e is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO_2e. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 1, *Global Warming Potentials and Atmospheric Lifetimes*. As shown in the table, the GWP for common GHGs ranges from 1 (CO_2) to 22,800 (SF_6).

Table 1
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	298
HFC-134a	14	1,430
PFC: Tetraflouromethane (CF_4)	50,000	7,390
PFC: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: IPCC 2007
HFC: hydrofluorocarbon; PFC: perfluorocarbon

2.1.3 Worldwide and National GHG Inventory

In 2013, total GHG emissions worldwide were estimated at 48,257 million metric tons (MMT) of CO_2e emissions (World Resource Institute [WRI] 2017). The U.S. contributed the second largest portion (13 percent) of global GHG emissions in 2013. The total U.S. GHG emissions was 6,213 MMT CO_2e in 2013, of which 82 percent was CO_2 emission (WRI 2017). On a national level, approximately 27 percent of GHG emissions were associated with transportation and about 38 percent were associated with electricity generation (WRI 2017).

2.1.4 State GHG Inventories

The California Air Resources Board (CARB) performed statewide inventories for the years 1990 to 2017, as shown in Table 2, *California Greenhouse Gas Emissions by Sector*. The inventory is divided into six broad sectors of economic activity: agriculture, commercial, electricity generation, industrial, residential, and transportation. Emissions are quantified in MMT CO_2e.

As shown in Table 2, statewide GHG source emissions totaled 431 MMT CO_2e in 1990, 471 MMT CO_2e in 2000, 449 MMT CO_2e in 2010, and 424 MMT CO_2e in 2017. Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions.

Table 2
CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR

Sector	1990 Emissions (MMT CO_2e)	2000 Emissions (MMT CO_2e)	2010 Emissions (MMT CO_2e)	2017 Emissions (MMT CO_2e)
Agriculture and Forestry	18.9 (4%)	31.0 (7%)	33.7 (8%)	32.4 (8%)
Commercial	14.4 (3%)	14.1 (3%)	20.1 (4%)	23.3 (5%)
Electricity Generation	110.5 (26%)	105.4 (22%)	90.6 (20%)	62.6 (15%)
Industrial	105.3 (24%)	105.8 (22%)	101.8 (23%)	101.1 (24%)
Residential	29.7 (7%)	31.7 (7%)	32.1 (7%)	30.4 (7%)
Transportation	150.6 (35%)	183.2 (39%)	170.2 (38%)	174.3 (41%)
Unspecified Remaining	1.3 (<1%)	0.0 (0%)	0.0 (0%)	0.0 (0%)
Total	430.7	471.1	448.5	424.1

Source: CARB 2007 and CARB 2019
MMT = million metric tons; CO_2e = carbon dioxide equivalent

A San Diego regional emissions inventory that was prepared by the University of San Diego School of Law, Energy Policy Initiative Center (EPIC) accounted for the unique characteristics of the region. Its 2014 emissions inventory update for San Diego is presented in Table 3, *San Diego County Greenhouse Gas Emissions by Sector in 2014*. The sectors included in this inventory are somewhat different from those in the statewide inventory. Similar to the statewide emissions, transportation-related GHG emissions contributed the most countywide, followed by emissions associated with energy use.

Table 3
SAN DIEGO COUNTY GREENHOUSE GAS EMISSIONS BY SECTOR IN 2014

Sector	2014 Emissions MMT CO_2e (% total)[1]
On-Road Transportation	1.46 (45%)
Electricity	0.76 (24%)
Solid Waste	0.34 (11%)
Natural Gas Consumption	0.29 (9%)
Agriculture	0.16 (5%)
Water	0.13 (4%)
Off-Road Transportation	0.04 (1%)
Wastewater	0.02 (1%)
Propane	0.01 (<0.5%)
Total	3.21

Source: USD EPIC 2017. County of San Diego 2014 Greenhouse Gas Inventory and Projections. Prepared by the University of San Diego School of Law, Energy Policy Initiative Center (EPIC), and available online at: https://www.sandiegocounty.gov/content/dam/sdc/pds/advance/cap/publicreviewdocuments/PostBOSDocs/CAP%20Appendix%20A%20%20-%202014%20Inventory%20and%20Projections.pdf.
[1] Percentages may not total 100 due to rounding.
MMT = million metric tons; CO_2e = carbon dioxide equivalent

2.2 REGULATORY SETTING

2.2.1 Federal Greenhouse Gas Regulations

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts* v. *U.S. Environmental Protection Agency*, that CO_2 is an air pollutant, as defined under the Clean Air Act (CAA), and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO_2, CH_4, N_2O, HFC, PFC, and SF_6) threaten the public health and welfare of the American people. This action was a prerequisite to finalizing the USEPA's GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA). The standards were established on April 1, 2010 for 2012 through 2016 model year vehicles and on October 15, 2012 for 2017 through 2025 model year vehicles (USEPA and NHTSA 2012).

2.2.1.1 Mandatory Reporting Rule of Greenhouse Gases

On January 1, 2010, the USEPA began requiring large emitters of heat-trapping emissions to begin collecting GHG data under a new reporting system. This program covers approximately 85 percent of the nation's GHG emissions and applies to roughly 10,000 facilities. Fossil fuel and industrial GHG suppliers, motor vehicle and engine manufacturers, and facilities that emit 25,000 metric tons or more of CO_2e per year are required to report GHG emissions data to the USEPA annually. This reporting threshold is equivalent to the annual GHG emissions from approximately 4,600 passenger vehicles.

2.2.1.2 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards

The USEPA and the NHTSA worked together on developing a national program of regulations to reduce GHG emissions and to improve fuel economy of light-duty vehicles. The USEPA established the first-ever national GHG emissions standards under the CAA, and the NHTSA established Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025. On August 2, 2018, the agencies released a notice of proposed rulemaking—the Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). The purpose of the SAFE Vehicles Rule is "to correct the national automobile fuel economy and greenhouse gas emissions standards to give the American people greater access to safer, more affordable vehicles that are cleaner for the environment." The direct effect of the rule is to eliminate the standards that were put in place to gradually raise average fuel economy for passenger cars and light trucks under test conditions from 37 miles per gallon (mpg) in 2020 to 50 mpg in 2025. By contrast, the new SAFE Vehicles Rule freezes the average fuel economy level standards indefinitely at the 2020 levels. The new SAFE Vehicles Rule also results in the withdrawal of the waiver previously provided to California for that State's GHG and zero emissions vehicle (ZEV) programs under section 209 of the CAA. The combined USEPA GHG standards and NHTSA CAFE standards resolve previously conflicting requirements under both federal programs and the standards of the State of California and other states that have adopted the California standards.

2.2.2 California Greenhouse Gas Regulations

2.2.2.1 Executive Order S-3-05

Signed by Governor Schwarzenegger on June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

2.2.2.2 Executive Order B-30-15

Signed by Governor Brown on April 29, 2015, EO B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG reduction targets with those of leading international governments, including the 28-nation European Union. California is on track to meet or exceed the target of reducing greenhouse gas emissions to 1990 levels by 2020, as established in AB 32. The updated emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050.

2.2.2.3 Assembly Bill 32 – Global Warming Solutions Act of 2006

Approved by Governor Schwarzenegger on September 27, 2006, the California Global Warming Solutions Act of 2006 (Assembly Bill 32 and Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599), widely known as AB 32, requires that the CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. AB 32 enacts the goals of EO S-3-05.

2.2.2.4 Senate Bill 32

Approved by Governor Brown on September 8, 2016, Senate Bill (SB) 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

2.2.2.5 Assembly Bill 197

A condition of approval for SB 32 was the passage of AB 197. Approved by Governor Brown on September 8, 2016, AB 197 requires that CARB consider the social costs of GHG emissions and prioritize direct reductions in GHG emissions at mobile sources and large stationary sources. AB 197 also gives the California legislature more oversight over CARB through the addition of two legislatively appointed

members to the CARB Board and the establishment a legislative committee to make recommendations about CARB programs to the legislature.

2.2.2.6 Assembly Bill 1493 – Vehicular Emissions of GHGs

Approved by Governor Davis on July 22, 2002, AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State." On September 24, 2009, CARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to merge its rules with the federal CAFE rules for passenger vehicles. In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single packet of standards called Advanced Clean Cars.

2.2.2.7 Assembly Bill 75

Approved by Governor Davis on October 7, 1999, AB 75 mandates state agencies to develop and implement an integrated waste management plan to reduce GHG emissions related to solid waste disposal. In addition, the bill mandates that community service districts providing solid waste services report the disposal and diversion information to the appropriate city, county, or regional jurisdiction. The bill requires diversion of at least 50 percent of the solid waste from landfills and transformation facilities, and submission to the California Department of Resources Recycling and Recovery (CalRecycle; formerly known as California Integrated Waste Management Board) of an annual report describing the diversion rates.

2.2.2.8 Executive Order S-01-07

EO S-01-07 was signed by Governor Schwarzenegger on January 18, 2007 and directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and directs CARB to determine whether an LCFS can be adopted as a discrete early action measure pursuant to AB 32. The CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in 2010. Although challenged in 2011, the Ninth Circuit reversed the District Court's opinion and rejected arguments that implementing LCFS violates the interstate commerce clause in September 2013. CARB is therefore continuing to implement the LCFS statewide.

2.2.2.9 Senate Bill 350

Approved by Governor Brown on October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard eligible resources, including solar, wind, biomass, and geothermal. In addition, large utilities are required to develop and submit Integrated Resource Plans to detail how each entity will meet their customers resource needs, reduce greenhouse gas emissions, and increase the use of clean energy.

2.2.2.10 Senate Bill 100

Approved by Governor Brown on September 10, 2018, SB 100 extends the renewable electricity procurement goals and requirements of SB 350. SB 100 requires that all retail sale of electricity to California end-use customers be procured from 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

2.2.2.11 Senate Bill 97 – California Environmental Quality Act: Greenhouse Gas Emissions

Approved by Governor Schwarzenegger on August 24, 2007, SB 97 required the OPR to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by the California Environmental Quality Act (CEQA), including but not limited to, effects associated with transportation or energy consumption. The Resources Agency certified and adopted the guidelines on December 31, 2009. The OPR guidance states that the lead agency can rely on qualitative or other performance-based standards for estimating the significance of GHG emissions, although the new CEQA Guidelines did not establish a threshold of significance.

2.2.2.12 California Air Resources Board: Scoping Plan

In December 2008, CARB adopted its first version of its Climate Change Scoping Plan (Scoping Plan), which contained the main strategies California will implement to achieve the mandate of AB 32 to reduce statewide GHG emissions to 1990 levels by 2020. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program.

On December 14, 2017, CARB adopted the 2017 Climate Change Scoping Plan (2017 Scoping Plan), which lays out the framework for achieving the mandate of SB 32 (2016) to reduce statewide GHG emissions to at least 40 percent below 1990 levels by the end of 2030 (CARB 2017a).

The 2017 Scoping Plan includes guidance to local governments in Chapter 5, including plan-level GHG emissions reduction goals and methods to reduce communitywide GHG emissions. In its guidance, CARB recommends that "local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the State's sustainable development objectives and develop plans to achieve the local goals." CARB further states that "it is appropriate for local jurisdictions to derive evidence-based local per capita goals [or some other metric] that the local jurisdiction deems appropriate, such as mass emissions or per service population, based on local emissions sectors and population projections that are consistent with the framework used to develop the statewide per capita targets" (CARB 2017a).

2.2.3 Local Policies and Plans

2.2.3.1 SANDAG: San Diego Forward: The Regional Plan

Initially adopted in 2011, *San Diego Forward: The Regional Plan* (Regional Plan) is the long-range planning document developed to address the region's housing, economic, transportation,

environmental, and overall quality-of-life needs. The Regional Plan is updated approximately every four years. The most recent version of the document was adopted by SANDAG in October 2015. The underlying purpose is to provide direction and guidance on future regional growth (i.e., the location of new residential and non-residential land uses) and transportation patterns throughout the region as stipulated under SB 375. The Regional Plan establishes a planning framework and implementation actions that increase the region's sustainability and encourage "smart growth while preserving natural resources and limiting urban sprawl." The Regional Plan encourages local jurisdictions, including the County of San Diego, to increase residential and employment concentrations in areas with the best existing and future transit connections, and to preserve important open spaces. The focus is on implementation of basic smart growth principles designed to strengthen the integration of land use and transportation. General urban form goals, policies, and objectives are summarized as follows:

- Mix compatible uses.
- Take advantage of compact building design.
- Create a range of housing opportunities and choices.
- Create walkable neighborhoods.
- Foster distinctive, attractive communities with a strong sense of place.
- Preserve open space, natural beauty, and critical environmental areas.
- Strengthen and direct development towards existing communities.
- Provide a variety of transportation choices.
- Make development decisions predictable, fair, and cost-effective.
- Encourage community and stakeholder collaboration in development decisions.

The Regional Plan also provides important guidance for communities that have borders with Mexico. In this case, the goal is to create a regional community where San Diego, its neighboring counties, tribal governments, and northern Baja California mutually benefit from San Diego's varied resources and international location.

SANDAG is currently developing the 2021 update to the Regional Plan. SANDAG's vision for the future of transportation in the San Diego region reimagines how people and goods move in the 21st century. SANDAG is applying key strategies—known as the 5 Big Moves—to envision a balanced transportation network that makes travel easier and quicker, increases access to opportunity, and meets state greenhouse gas emissions mandates.

2.2.3.2 County of San Diego General Plan

The County 2011 General Plan includes a plan to balance population growth and development with infrastructure needs and resource protection. The current General Plan is based on smart growth and land planning principles that will reduce vehicle miles travelled (VMT), and thus result in a reduction of GHGs. This will be accomplished by locating future development within and near existing infrastructure.

2.2.3.3 County of San Diego Climate Action Plan

In February 2018, the County adopted a long-term programmatic Climate Action Plan (CAP) that outlines the actions the County would undertake to achieve its proportional share of state GHG emission reductions to be compliant with AB 32 and EO S-3-05.

After hearing petitions challenging the CAP, the San Diego County Superior Court ruled on December 24, 2018 – which the Appellate Court affirmed on June 12, 2020 – that the CAP failed to adequately account for potential environmental impacts for General Plan Amendment projects, and the County is required to set aside and vacate the CAP, the certification of its associated Supplemental EIR, and related actions. As a result, on September 30, 2020, the County Board of Supervisors rescinded and vacated the CAP and associated actions. Pending adoption of a new CAP, the County would continue to implement the 26 GHG reduction measures and sustainability initiatives and programs identified in the 2018 CAP to reduce GHG emissions to meet the State's 2030 reduction target. Since the CAP has been formally rescinded, it is not discussed further in this report.

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGIES

3.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Given the relatively small levels of emissions generated by a typical project in relationship to the total amount of GHG emissions generated on a regional, national, or global basis, individual projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from individual projects could result in significant, cumulative impacts with respect to climate change. Thus, the potential for a significant GHG impact is limited to cumulative impacts.

In the absence of County-established threshold for GHG emissions, State CEQA Guidelines Appendix G criteria shall apply to determine if the proposed project would result in a significant impact. Specifically, a significant impact from GHG emissions would result if the Proposed Project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

- Conflict with an applicable plan, policy or regulation adopted for reducing the emissions of greenhouse gases.

CEQA Section 15064.4 states that a CEQA lead agency "should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." It also states that the lead agency has the discretion to determine the methodology to assess the significance of GHG emissions on the environment. Accordingly, the following section describes the threshold of significance applied to the Proposed Project.

3.1.1 CAPCOA Screening Levels

To establish context in which to consider the Proposed Project's GHG emissions, this analysis reviewed guidelines used by other experts and public agencies. Prior to 2020, a screening level based on the California Air Pollution Control Officers Association's (CAPCOA) report *CEQA & Climate Change* was used as a tool used to determine whether further analysis would be needed to examine the GHG impacts of a proposed project (CAPCOA 2008). CAPCOA developed a 900 MT CO_2e per year screening threshold by analyzing the capture of 90 percent or more of future discretionary development for residential and commercial projects across the state. Direct and cumulative impacts would be potentially significant and require further analysis if a project results in emissions that exceed 900 MT CO_2e beyond current baseline emissions. This screening threshold was developed with the goal in mind of achieving the reductions described by AB 32 for meeting 1990 levels of statewide GHG emissions by the year 2020.

Subsequently, SB 32 set a further GHG emission reduction target of 40 percent below 1990 levels by 2030. To achieve this target, a regression trajectory can be projected by reducing the operational year emissions goal from the 900 MT CO_2e target in 2020 to the 540 MT CO_2e target in 2030. This trajectory is outlined in Table 4, *GHG Significance Thresholds Trajectory*, below. Therefore, for the purpose this report, 540 MT CO_2e is considered a valid and adequate screening level as it is based on current methodologies. It is not the intent of the County to adopt the above screening levels as mass emission limits for this or other projects, but rather to disclose this information and put the project-generated GHG emissions in the appropriate statewide context and consider the Proposed Project's potential impacts pursuant to CEQA.

Table 4
GHG SCREENING LEVEL TRAJECTORY

Year	Screening Level (MT CO_2e)
2020	900
2021	855
2022	813
2023	722
2024	734
2025	697
2026	662
2027	629
2028	598
2029	568
2030	540

Source: CAPCOA 2008; SB 32
Note: Emissions reduce by 4.98 percent each year to achieve SB 32's 2030 target.
MT = metric tons; CO2e = carbon dioxide equivalents.

3.2 METHODOLOGY AND ASSUMPTIONS

3.2.1 GHG Emission-generating Activities

Under the Proposed Project, the IVMP would continue the use of the following vector control techniques: surveillance and monitoring, source reduction (i.e., physical control), source treatment

(i.e., biological and chemical controls), public education and outreach, and disease diagnostics. Emerging vector control strategies that may be implemented to address future public health risks and public nuisances could include, but not be limited to, increased or advanced/early source prevention and/or reduction, surveillance, or physical/biological/chemical controls.

Surveillance and monitoring activities include evaluation of mosquito-breeding areas by conducting surveys via ground vehicles, aircraft (including piloted and unmanned), watercraft, and remote sensing equipment; trapping of mosquitoes and rodents; and testing of collected samples for vector-borne diseases. The reduction of vector-breeding sources primarily involves physical control techniques that eliminate or reduce standing water that functions as mosquito breeding habitat. These techniques include, but are not limited to, vegetation management including trimming and removal of vegetation and application of herbicides; removal of sediment; water control; and other maintenance activities.

Source treatment involves application of biological and chemical controls to control, manage, and reduce vectors. It can include the use of natural predators, parasites, or pathogens to reduce immature mosquito numbers (biological controls) and application of chemical controls that are pesticides that target larvae (larvicides) or adult mosquitos (adulticides). The primary technique employed by the VCP for biological controls is the introduction of mosquito fish into artificial mosquito breeding sources such as ornamental ponds, rain barrels, horse troughs, neglected swimming pools, and spas to reduce the abundance of mosquitoes. Pesticides are applied through on-ground techniques such as by foot with backpack applicators, vehicle-mounted equipment, or watercraft by qualified, certified technicians, or by aircraft (including piloted and unmanned) when land-based methods are not practicable due to the size of the area to be treated or impediments to access. The IVMP follows BMPs described in State guidance documents, such as the *Best Management Practices for Mosquito Control in California* (California Department of Public Health [CDPH], 2012), *Best Management Practices for Mosquito Control on California State Properties* (CDPH, 2008), and in the *California Mosquito-Borne Virus Surveillance and Response Plan* (CDPH, 2020), which detail vector control and pesticide application procedures.

3.2.2 Analysis Methodology

The Proposed Project's GHG emissions were calculated using a combination of the California Emission Estimator Model (CalEEMod), Version 2016.3.2 and CARB's emission inventory models EMFAC and OFFROAD, in accordance with the County Guidelines for Determining Significance and Report Content and Format Requirements for Climate Change (County 2018e). GHG emissions are estimated in terms of total metric tons (MT) of CO_2e.

Operation of on-road fleet vehicles, watercraft, aircraft, portable equipment, and small equipment would result in emissions of GHGs from engine exhaust. Equipment lists and annual activity schedules were provided by DEH (County 2020). Some equipment would not generate GHG emissions and were therefore excluded from this analysis. Excluded equipment includes hand operated tools, attachments, and other equipment such as battery-powered traps. The list of equipment used in the IVMP GHG emissions analysis is provided in Appendix A. Emission calculations were performed using the most recent and applicable emission factors published by CARB and the USEPA. A list of emissions generating equipment, assumed usage, and emission factor source is provided in Table 5, *IVMP Equipment Usage*.

Table 5
IVMP EQUIPMENT USAGE

Equipment Name	Equipment Type	Total Annual Average Usage (hours)	Emission Factor Source
Land Surveillance and Application/Management			
Dump Truck[1]	Dump Truck	330	CARB's OFFROAD
Caterpillar 320[1]	Excavator	80	CARB's OFFROAD
Polaris Sportsman[1]	ATV Quad with Plow	32	CARB's OFFROAD
John Deere 6420[1]	Tractor	36	CARB's OFFROAD
Caterpillar D3[1]	Tracked Dozer	48	CARB's OFFROAD
Woodchipper[1]	Processing Equipment	48	CARB's OFFROAD
Arrow ULV (gas)	Hand Sprayer/ Fogger	24	CARB's OFFROAD
Colt ULV (gas)	Hand Sprayer/ Fogger	12	CARB's OFFROAD
Maruyama	Granular applicator	180	CARB's OFFROAD
Buffalo turbine	Vehicle -mounted sprayer	24	CARB's OFFROAD
Skid Sprayer	Vehicle-mounted sprayer	72	CARB's OFFROAD
Fleet Vehicle	Medium Duty Truck	178,447 miles	CARB's EMFAC
Fleet Vehicle	Light Duty Truck	212,310 miles	CARB's EMFAC
Water Surveillance and Application/Management			
Marshmaster MM-1LX[1]	Aquatic Weed Harvester	96	CARB's OFFROAD
Pond Pump – WB15	Pond Pump	78	CARB's OFFROAD
Boat motor – 5 horsepower four stroke engine	Outboard Motor	60	CARB's PC2014
Boat motor – 9.9 horsepower four stroke engine	Outboard Motor	60	CARB's PC2014
Aerial Surveillance and Application/Management			
Bell 206B	Aircraft	85.3	USEPA AP-42
Robinson R44 Raven II	Aircraft	50	USEPA AP-42
Piper Chieftain	Aircraft	6	USEPA AP-42

Source: County 2020

[1] Equipment/vehicle is not listed in County's existing inventory (2020b), but could potentially be used, if needed.

Note: this table only includes equipment that is gas-powered. Equipment that is battery-operated is excluded since no GHG emissions would occur.

4.0 PROJECT IMPACT ANALYSIS

4.1 GREENHOUSE GAS EMISSIONS

Operation of on-road fleet vehicles, watercraft, aircraft, portable equipment, and small equipment would result in emissions of GHGs from engine exhaust. Table 6, *Estimated Annual Operational Emissions*, presents the summary of operational emissions for the Proposed Project. Operational emission calculations are provided in Appendix A.

Table 6
ESTIMATED ANNUAL GHG EMISSIONS

Category[1]	CO_2 Pollutant Emissions (metric tons per year)	CH_4 Pollutant Emissions (metric tons per year)	N_2O Pollutant Emissions (metric tons per year)	CO_2e Pollutant Emissions (metric tons per year)
Land Surveillance and Application/Management	204.40	0.0055	0.0043	205.83
Water Surveillance and Application/Management	2.99	0.0011	0.0002	3.06
Air Surveillance and Application/Management	75.35	0.0020	0.0022	76.05
Total Annual Emissions	**282.73**	**0.0086**	**0.0067**	**284.94**

Source: Calculations using emission factors from CARB EMFAC2017, ORION Off-Road database, and EPA AP-42 (calculation data is provided in Appendix A).

[1] Categories were derived from Table 5.

CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalents

As shown in Table 6, implementation of the IVMP has been conservatively estimated to emit approximately 284.94 MT CO_2e annually. Proposed Project emissions during IVMP implementation would not exceed the screening threshold of 540 MT CO_2e adjusted from CAPCOA for compliance with SB 32 in 2030. Therefore, the Proposed Project's emissions would result in a less than significant impact.

5.0 CUMULATIVE IMPACT ANALYSIS

The proposed IVMP would continue to comprehensively approach vector control through various techniques, including surveillance and monitoring, source reduction (i.e., physical control), source treatment (i.e., biological and chemical controls), public education and outreach, and disease diagnostics. The proposed IVMP would not generate growth, increase population or associated vehicle usage, or require the alteration of an existing land use designation through amendments to general plans or changes to zoning. Furthermore, as shown in Table 6, the Proposed Project would not result in a significant increase in GHG emissions. Therefore, the Proposed Project would have a less than significant cumulative impact with respect to climate change.

6.0 SUMMARY OF RECOMMENDED PROJECT DESIGN FEATURES, IMPACTS, AND MITIGATION

In summary, the Proposed Project would result in the emission of GHGs during the ongoing implementation of the IVMP. The analysis evaluated the potential for adverse impacts to climate change due to the Proposed Project emissions. Operation of on-road fleet vehicles, watercraft, aircraft, portable equipment, and small equipment would result in emissions of GHGs from engine exhaust. As detailed in Section 4.1, the Proposed Project emissions of GHGs during IVMP implementation would not exceed the screening threshold of 540 MT CO_2e adjusted from CAPCOA for compliance with SB 32 in 2030. Additionally, the Proposed Project would implement the BMPs described in Section 1.3, above, including limiting of idling time and proper maintenance of vehicles and equipment to reduce GHG emissions. Therefore, the Proposed Project would have a less-than-significant cumulative impact with respect to climate change.

6.1 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Because the Proposed Project would not result in significant impacts, no mitigation or design considerations are required.

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8.0 LIST OF PREPARERS

Joanne M. Dramko, AICP	County-approved Air Quality Specialist
Victor Ortiz	Senior Air Quality/GHG Specialist
Brendan Sullivan	Air Quality/GHG Analyst
Yara Fisher	Project Manager

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942