



2023

Climate Risk Assessment

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Introduction

The Task Force on Climate-related Financial Disclosures (TCFD) developed a set of recommendations for robust climate-related disclosures, allowing stakeholders to understand a company’s vulnerability to climate-related risks and identify potential climate-related opportunities. TCFD provides a framework for companies to disclose these climate-related financial risks and opportunities, focusing on four areas: governance, strategy, risk management, and metrics and targets. By reporting in line with TCFD, GreenWaste demonstrates our continued commitment to transparent reporting and, as a leader in sustainability, our resiliency as the world transitions to a low-carbon economy.

GreenWaste has historically and proactively embraced sustainability and social responsibility. Climate-related considerations have long been part of our strategic planning as we recognize that severe, climate-driven weather events can affect the human health and employees wellbeing, destroy infrastructure, upset national economies, and lead to shortages of resources. According to the Intergovernmental Panel on Climate Change (IPCC), if average temperature increases exceed 1.5°– 2° Celsius (°C), changes in natural habitats can diminish regional habitability, threaten food security, and strain water sources.¹ Therefore, our climate-related risk assessment uses Representative Concentration Pathways (RCPs) to review risks and is in line with the IPCC’s assessment reports as well as the Paris Agreement goal to limit global average warming to 1.5° Celsius above pre-industrial levels.²

PHYSICAL AND REGULATORY CLIMATE SCENARIO CONSIDERATIONS

Climate Scenario	Associated Physical and Regulatory Considerations
<p>RCP 2.6 Associated with an approximate 1.6°C (2.9°F) increase in mean temperatures by the end of the 21st century when compared to a pre-twentieth century baseline.</p>	<p>Global emissions are aggressively lowered by midcentury, thus limiting the progression of climate change, and preventing the most extreme climate risks from developing. Typically, a stringent regulatory policy landscape is key to mitigation strategy under this scenario, including a decarbonized electric grid, replacement of fossil fuels in transportation, and/or the deployment of carbon removal technologies.</p>
<p>RCP 4.5 Associated with an approximate 2.4°C (4.3°F) increase in mean temperatures by the end of the 21st century when compared to a pre-twentieth century baseline.</p>	<p>A compromise between the two other RCPs involving a gradual reduction in emissions and a less strict policy framework. While there are still risks such as heat waves, extreme weather, and rising sea levels, they are not as severe or frequent as in the RCP 8.5 scenario.</p>
<p>RCP 8.5 Associated with an approximate 4.3°C (7.7°F) increase in mean temperatures by the end of the 21st century when compared to a pre-twentieth century baseline.</p>	<p>A lax regulatory policy landscape with little to no enforced emission reductions, thus assuming emissions continue to rise throughout the twenty-first century. Extreme heat waves and other weather events, significant sea level rise, and extended drought scenarios are considered likely risks under these conditions.</p>

Strategy

Actual and potential impacts of climate-related risks and opportunities on our business, strategy, and financial planning.

Our strategic approach to managing climate-related impacts is intertwined with GreenWaste's Mission to focus our innovation, people, and commitment to be green first to revolutionize how we transform the world's waste and our Purpose to constantly seek and inspire new ideas that solve the world's hardest sustainability challenges.

As part of the global climate strategy, we are committed to decreasing our greenhouse gas (GHG) emissions footprint by reducing our direct (Scope 1) and indirect (Scope 2) GHG emissions.

We have a near-term 2030 goal to reduce total combined Scope 1 and 2 emissions by 45% from our 2022 baseline. Our long-term climate strategy is to be net zero in Scope 1 and 2 emissions by 2040.

Our science-based net zero target aligns with the Intergovernmental Panel on Climate Change (IPCC) pathway in limiting global temperatures to at least 1.5°C or 2.7° Fahrenheit (°F).

We also reduce our customer's emissions footprint by managing waste, recyclables, and organics as a climate resource. We do so by creating renewable energy, producing mulch and compost, and recovering materials to be used in the manufacture of new products – extending the life cycle of waste materials, decreasing raw material extraction, and supporting a circular economy.

As part of the TCFD process and recommendations, we reviewed the actual and potential impacts of climate-related risks and opportunities for our business operations, strategic direction, and financial planning. This involved conducting a climate risk and scenario assessment, continuing to integrate climate considerations into our business strategy, and evaluating our financial and risk management processes to ensure redundancy and adaptability in the face of climate-related risks. Climate-related risks are increasingly influencing global business, including

our industry. Thus, GreenWaste examined the state of global emissions, and acute and chronic climate stressors such as severe local heat, extreme weather events, and disruption in resource availability to identify vulnerabilities, develop resilience in our operations, and prepare for a net-zero or carbon-neutral transition.

Given the inherent uncertainties surrounding the exact outcomes of climate change, our approach is necessarily forward-looking and adaptive. Climate science is ever evolving and, therefore, to remain responsive to emerging risks and opportunities related to climate change, our assessments must be regularly reviewed and updated as new evidence and climate projections are revealed.

The climate-related risks evaluated align with those identified as likely outcomes in RCPs 2.6, 4.5, and 8.5, whose respective mild, moderate, and severe emissions scenarios offer a glimpse into potential climate futures. The RCPs were selected for our climate scenario analysis based on the RCPs used in the IPCC's Climate Change 2023 Synthesis Report as well as California's Fourth Climate Change Assessment^{3,4}. The range of the selected RCP scenarios allow us to analyze the outcomes under different assumptions about economic growth, technological advancements, and regulatory policy conditions concerning climate change mitigation and adaptation.

Physical Risks

In evaluating climate risk, we employ a traditional approach that assesses the likelihood and consequence of risks to understand their severity or materiality. Risks can then be prioritized by examining their severity derived from the intersection between likelihood and potential impacts.

Physical risks are the potential physical impacts a business may experience due to climate change and are either categorized as acute or chronic. Acute risks are event-driven and include the impacts from extreme weather events such as atmospheric rivers, cyclones, wildfires, and storms. Chronic risks result from longer-term changes in climate patterns, such as sustained higher temperatures, sea-level rise, and changing precipitation patterns.

GreenWaste has operations across Northern California, including Sacramento, the San Francisco Bay Area, and the Monterey Coast. We evaluated physical risk through those regional geographic areas, which share microclimates and are supported by similar levels of infrastructure development. In our climate scenario analysis, we examined the physical risks suggested by RCPs 4.5 and 8.5 against an end-century thirty-year average time horizon, consulting both global resources, such as the IPCC's Sixth Assessment Report, and local resources, such as California's Fourth Climate Change Assessment^{5,6,7} and regional reports, and the Cal-Adapt climate modeling tool developed by a collaboration between UC Berkeley, the California Energy Commission, and the California Strategic Growth Council.⁸ Identified critical physical risks include:

HEAT

As the climate warms, average daily high temperatures are projected to increase across California and will affect all GreenWaste facilities. Analysis reveals this threat is textured. Under RCP 4.5, our coastal facilities along the Monterey Coast and San Francisco Bay are projected to experience a rise by approximately 2.2°C (4°F) by the end of the century, whereas our inland Sacramento facility is projected to experience an increase of 2.8°C (5°F). Under RCP 8.5, the projected temperature rise is starker. Our Monterey Coast and San Francisco Bay facilities are projected to experience approximately 3.8°C (6.8°F) of temperature increase, and Sacramento is projected to experience as much as 4.4°C (8°F).

Our GreenWaste Florin Perkins Resource Recovery Facility in California's Sacramento Valley is subject to the most significant temperature increases and, as such, may have the most vulnerability to heat-related operational risks such as health and safety, whereas our coastal facilities may be more vulnerable to water-related physical risks.

WATER

Our sites are sufficiently distant from water sources or at sufficient elevation to avoid the greatest sea level rise and storm surge threats. For example, although one of our San Jose sites borders marshland directly, its elevation exceeds the projected water level rise even under the most extreme emissions (RCP) scenarios. However, we may still encounter risk through, e.g., route obstructions or be affected by downstream consequences resulting from other business impacts.

Climate change is escalating flood risks across California, with increased extreme weather events and higher river flows threatening Sacramento Valley, while rising sea levels and storm surges jeopardize infrastructure, coastal habitats and communities in the San Francisco Bay Area and Monterey Coast. Due to these area risks and facility siting, although our facilities are not in direct projected⁸ pathways of intense flooding, they could be vulnerable to climate-related flood risks.

OTHER

Since our business also provides waste and recycling collection services, including during or related to severe weather events, our geographic considerations extend across the entire area occupied by our customer base, not just at our facilities. Though our facilities are not in the direct projected path of intense flooding according to projections⁸, due to sea level rise or to storm-related temporary surges, many of the communities we serve are in at-risk areas. The physical risk exposure faced by our labor force, vehicles and equipment may be heightened by the vulnerability of our service area, though intensity of impact varies across geography and projected conditions.

GREENWASTE IDENTIFIED POTENTIAL PHYSICAL CLIMATE RISKS^{9,10}

	Potential Risk Exposure	Potential Likelihood	Potential Consequence	Potential Business Impact	Potential Mitigation Actions or Opportunities
Increased Storm Intensity <i>(Acute)</i>	Atmospheric river intensity is predicted to increase bringing extreme precipitation, potentially damaging infrastructure, disrupting operations, and causing flooding and coastal inundation.	Likely	Major	Damage to facility and equipment necessitating repairs, operational disruptions, reduced productivity, increased investment in contingency and recovery efforts	Reinforce infrastructure, where possible, stage trucks, fortify emergency response and business continuity plans, collect/process increased waste tonnage
Precipitation Variations with Prolonged Droughts <i>(Acute and Chronic)</i>	Warming air will lead to less rainfall and extended drought conditions which can limit water availability and necessitate water management strategies.	Likely	Moderate	Increased water procurement costs, increased dust control measures	Employ water-efficient processes, seek alternative or recycled water sources; decreased waste tonnage
Rising Average Temperatures and Extreme Heat Waves <i>(Acute and Chronic)</i>	Higher temperatures can affect employee health, increase cooling costs, and stress energy systems, requiring operational and facility.	Almost certain	Moderate	Increased utility costs to meet cooling needs, rise in equipment maintenance costs, outdoor worker schedule adjustments to reduce heat exposure, increase in labor health and safety risks, investment in mitigation measures and new HVAC technologies.	Use of heat-resistant materials, enhanced and efficient cooling systems, specialized personal protective equipment (PPE), continued investment in equipment and vehicles with A/C
Increased Wildfire Risks <i>(Acute)</i>	More frequent and severe wildfires can threaten physical assets, disrupt supply chains, impact insurance costs and availability, and degrade air quality	Likely <i>(particularly in the Sacramento area)</i>	Severe	Property and asset damage, increase in insurance costs, electricity grid interruptions and outages, removal of soot accumulation, air quality mitigation measures	Fire-resistant infrastructure and use of ignition-resistant materials, reduce reliance on electrical grid, eliminate brush/vegetation near buildings, collect/process increased waste tonnage
Sea Level Rise <i>(Chronic)</i>	Sea level has already increased and is expected to rise under all climate scenarios endangering coastal facilities, communities, and infrastructure	Likely <i>(in coastal areas)</i>	Catastrophic <i>(in coastal areas)</i>	Asset loss, relocation costs, increased repair costs, surrounding habitats and environmental control measures may be impacted, elevated water table leading to groundwater intrusion	Relocation of coastal or flood-prone facilities, increase facility flood defenses, use of natural “green” infrastructure
Habitat Destruction and Loss of Biodiversity <i>(Chronic)</i>	Loss of critical ecosystems and irreversible biome-scale ecosystem disruptions could necessitate shifts in business strategies	Possible	Moderate	Higher raw material costs, supply chain disruptions, increased exposure to natural disasters, increased regulatory compliance costs	Investment in restoration and conservation projects, partnerships in habitat conservation initiatives, biodiversity-friendly and sustainable sourcing practices

	Potential Risk Exposure	Potential Likelihood	Potential Consequence	Potential Business Impact	Potential Mitigation Actions or Opportunities
Water Stress & Scarcity <i>(Chronic)</i>	Inadequate water supply, reduced Water resource availability is impacted by precipitation fluctuations, less snow-pack, and increased use of groundwater, and rising temperatures leading to increased erosion and air particulates contaminate drinking water, increased erosion, and air particulates.	Likely	Major	Higher operational costs to implement dust control measures and access to potable water, increase in occupational respiratory illness and pulmonary issues	Increase use of recycled or reclaimed water sources, employ efficient water usage technologies, use of dust removal tools and wetting agents, respiratory PPE for employees
Changes in Land Use and Cover <i>(Chronic)</i>	Land use is affected by altered rainfall patterns, increased temperatures, and exacerbated by frequency and intensity of extreme weather events altering land, habitat and agricultural suitability and influencing carbon sequestration	Likely	Moderate	Increased regulatory compliance costs, economic activity changes, depletion of natural resources and environmental degradation, rising infrastructure costs, nonpoint source pollution mitigation, increase in employee commuting times	Use of nature-positive and resilient infrastructure design considering conservation, regeneration and growth, sustainable land use planning, intensive stakeholder engagement
Resource Depletion and Environmental Degradation <i>(Chronic)</i>	Climate change can lead to exploitation of natural resources causing scarcity and environmental deterioration can impact natural resources	Almost Certain	Major	Increased raw material costs, significant operational risks and uncertainties, amplified compliance, and remediation costs	Sustainable operational and sourcing practices, enhanced resource efficiency, increased government investment in recycling infrastructure, development of new materials and innovative technologies

LIKELIHOOD¹¹

The probability of a climate-related risk or event occurring is categorized as:

Rare: Unlikely during the next 25 years; probability very small

Unlikely: May arise once in 10 years to 25 years; Probability low but noticeably greater than zero

Possible: May arise once in 10 years; Probability less likely (less than 50%) than not but still appreciable

Likely: May arise about once per year; Probability is as likely as not (a 50%/50% chance)

Almost certain: Could occur several times per year; Probability is more likely than not (greater than 50%)

CONSEQUENCE¹¹

The impact of a climate-related risk or event is categorized as:

Minor: Small impacts with minimal disruption, easily managed within routine operations.

Moderate: Noticeable effects requiring specific actions, with manageable financial and operational disruptions.

Major: Significant consequences affecting finances and operations, demanding dedicated management efforts.

Severe: Serious threats to business viability, involving major financial losses and requiring extensive recovery efforts.

Catastrophic: Extreme, potentially irreversible damage leading to business failure or major operational shutdown.

Transition Risks and Opportunities

Transition risks refer to the financial or business impacts resulting from a transition to a lower carbon economy. This transition, already occurring in California, is marked by changes in climate policy and regulations, emergence of new technologies, shifting market dynamics, and changing societal expectations.

RCP scenarios with greater emphasis on social and economic transition are projected to avoid the greatest physical risks posed by climate change. However, uncertainty and complexity exist around a transition to a low carbon economy, and a shift could be hindered by future political, economic, and institutional constraints. Thus, we used RCPs 2.6, 4.5, and 8.5 in our transition risk/opportunity analysis.¹² As we navigate the shift to a low carbon economy, we are transforming transition risks into opportunities by proactively adapting to regulatory and policy changes, integrating innovative low carbon technologies, and leading sustainability efforts, as discussed below:

LOW CARBON ENERGY

GreenWaste has invested in energy independence measures like solar installations at our facilities to reduce dependence on a strained grid. Our GreenWaste Renewable Energy Digestion Facility produces electricity both used to power the facility and support the electric grid. We have also transitioned to 100% renewable or alternative fuels to power our fleet and heavy equipment, including electric collection vehicles and electric vehicle charging infrastructure, which reduces our dependence on traditional diesel fuel and positions us well to adapt to California's Advanced Fleets regulatory milestone schedule.¹³ We continue to examine opportunities to invest in renewable or low-emission energy sources.

CLIMATE POLICY

GreenWaste engages with industry organizations, trade groups, and our municipal customers to offer industry expertise on upcoming regulatory and policy requirements. By participating in the policy development process, we hope to contribute specialized knowledge necessary to help ensure regulations are effective, complete, and feasible within the proposed implementation timelines. GreenWaste takes a proactive approach to work with regulators on innovative pilot projects to meet or exceed new or enhanced recycling and sustainability objectives.

SUSTAINABILITY LEADERSHIP

GreenWaste has been a leader in developing sustainable business processes since its inception. As such, we consider ourselves well-positioned to adapt to future requirements and to maintain our credibility and transparency in the face of increasing stakeholder scrutiny and directives related to sustainability and climate change.

Assessing climate change impacts within an ESG framework involves integrating environmental, social, and governance factors with climate transition risks. This approach not only addresses the environmental challenges of moving towards a low carbon economy but also ensures that social equity and corporate governance align with climate adaptation strategies.

GREENWASTE IDENTIFIED POTENTIAL TRANSITION RISKS AND OPPORTUNITIES^{14 15}

	Potential Risk Exposure	Potential Likelihood	Potential Consequence	Potential Business Impact	Potential Mitigation Actions or Opportunities
Energy Resilience	Sourcing renewable energy and fuels is pivotal for energy resilience, and to smoothly transition to a low carbon economy as well as reduce GHG emissions	Likely	Moderate	Reallocation of capital and/or pursuit of PPA financing options to fund the transition to renewable energy. Increasing energy resilience reduces dependency on traditional energy sources and aging equipment which can be vulnerable to extreme weather events ¹⁶	Investing in renewable energy and energy efficiencies can drive innovation, and innovative companies will have a competitive edge
Technological Advances	Mitigation of climate change along with ambitious climate action policies and targets can stimulate technological innovation ¹⁷	Almost Certain	Moderate	Strategic investment and planning in research and development, new technologies can render existing technologies as obsolete requiring costly upgrades, increased costs in adapting to new technologies	Innovation and adaption to new technologies, building of strategic partnerships for technological advancements, early adoption of new technologies can enhance brand and reputation, access to funding and support for green technologies
Employee Productivity, Attraction & Retention, Satisfaction & Wellbeing	Increasing temperatures and severe weather events can alter work environments, and employee health can be impacted, potentially diminishing job satisfaction. Companies that proactively address climate-related challenges and demonstrate a commitment to sustainability are more likely to attract and retain talent ¹⁸¹⁹	Possible	Moderate	Variations in operational efficiency and productivity, demographics and geographic placement of work force may change, employee morale, productivity, attendance, and sense of belonging and dedication to mission may be affected, potentially higher turnover rates, recruitment and training costs, increased employee health care costs	Programs promoting employee well-being, continue to provide access to quality health care, competitive benefits, employee check-ins, flexible work arrangements, positive work culture and work/life balance, offer ergonomic workplaces, lead in sustainability business practices, programs, and policies, continued commitment to environmental stewardship
Supply Chain Disruption	Availability of products, parts, supplies, raw materials, and fuels, ability to provide services, transportation, and logistics can all be impacted by supply chain issues ²⁰	Likely	Major	Increased operational costs, less operational efficiencies, the need for alternative materials, increase in GHG emissions footprint, inability to maintain facilities and fleet, price volatility in commodity prices	Use of sustainable materials suppliers and support of responsible production, diversification of suppliers, strategic inventory management (particularly for critical materials), understand supplier climate risks and resiliency

	Potential Risk Exposure	Potential Likelihood	Potential Consequence	Potential Business Impact	Potential Mitigation Actions or Opportunities
Worker, Contractor, & Visitor Health & Safety	Climate-related risks to workers/ contractors working outdoors or in vulnerable settings include heat stress, dehydration, and increased accidents due to hazardous conditions, visitors to our facilities or community events may face increased risk due to climate-related impacts ²¹	Possible to Likely	Moderate to Major	Increased liability, insurance costs and premiums, increased risk of work-related injuries, loss of productivity, operational disruptions, higher costs related to compensation claims for injuries sustained due to extreme weather conditions, potential reputational damage affecting customer loyalty and revenues	Enhanced safety protocols during extreme weather conditions including heat stress monitoring, new technology or uniforms, weather-adaptive scheduling strategies, safety training on recognizing and mitigating risks associated with climate-related hazards, secure facilities, clear safety guidelines for visitors, explicit emergency response plans for extreme weather events
Consumer Satisfaction/ Preferences	Customers increasingly prefer companies that demonstrate sustainability and actively contribute to mitigating climate change ²²	Likely	Moderate	Revenue opportunities and market share expansion, brand loyalty increases, development of new waste handling, recovery, and recycling technologies	Implement customer feedback systems, increased demand for sustainable practices and business, consumer preference for services that have a lower environmental impact
Market Shifts	Consumer preferences, regulatory landscapes, and competitive dynamics can be altered by climate change with profound financial impacts on business ²³	Almost Certain	Major	Business model adaptation to sustainability and ESG, costs to adapt to new environmental regulations potentially impacting profitability, potential increases in capital, insurance, and operational costs to transition to a low carbon economy	Embed sustainability into core business strategy, invest in research and development of sustainable technologies and practices, actively engage with customers, investors, and regulators, communicate sustainability efforts, proactively engage in policy development, assess, update risk management strategies
Community/ Stakeholder Engagement and Business Reputation	Climate change intensifies the need for meaningful community engagement as stakeholders expect businesses to actively contribute to sustainability efforts and transparently communicate their climate action plans and targets. ²⁴ Climate change can also impact freedom of association by disrupting participation in civic and community activities. ²⁵	Likely	Moderate	Neglecting community or stakeholder concerns about climate change can damage a company's reputation, potentially leading to a loss of customers, decreased investor confidence, and challenges in attracting talent, as well as additional operational costs by implementing changes based on stakeholder feedback; robust engagement can lead to accessing new markets	Enhanced communication strategies articulating the commitment to addressing climate change, stakeholder inclusion in the planning and decision-making processes, publicly report to recognized sustainability reporting frameworks, invest in community initiatives that address local environmental concerns, establish robust mechanisms for receiving and responding to community and stakeholder feedback
Emissions Reporting Obligations	Increasing regulatory focus on climate change elevates the importance of accurate and transparent emissions reporting and climate-related disclosures ²⁶	Almost Certain	Moderate	Non-compliance with reporting requirements can result in penalties, reputational damage, and investor withdrawal	Anticipate legislative and regulatory changes, implement robust tracking and reporting systems for emissions, engage in third-party verification to ensure accuracy of data and disclosure statements

	Potential Risk Exposure	Potential Likelihood	Potential Consequence	Potential Business Impact	Potential Mitigation Actions or Opportunities
Regulatory Compliance & Enforcement	Stricter environmental regulations mean businesses must adapt quickly to comply. California has enacted regulations and legislation setting stringent standards for climate-related disclosures, environmental reporting, transparency, and accountability ²⁷	Almost Certain	Moderate	Non-compliance with reporting requirements can result in penalties, reputational damage, and investor withdrawal	Anticipate legislative and regulatory changes, implement robust tracking and reporting systems for emissions, engage in third-party verification to ensure accuracy of data and statements
Ownership Structure & Control/Access to Capital	Climate change considerations can influence shareholder and investor expectations, a company's governance structure, as well as its attractiveness to lenders and investors ²⁸	Almost Certain	Moderate	Financial penalties and operational disruptions can occur from non-compliance, sales of products to other countries may be affected	Stay informed of legislative and regulatory changes, invest in environmental compliance management systems and training
Acquisitions and Divestments	Climate change considerations are becoming critical in Mergers & Acquisitions and investment decisions ²⁹	Possible	Major	Potential devaluation of assets not aligned with a low-carbon transition, opportunities for growth in green sectors or in emerging technologies	Evaluate climate risks and opportunities during the due diligence process, strategically acquire assets with ESG priorities in mind, divest or efficiently transition from ESG high-risk areas or activities
Investor Interests	Investors are increasingly interested in business ESG strategies, sustainability practices, and renewable energy creation ³⁰	Likely	Major	Restricted funding opportunities for companies not transparent about their emissions, companies not reducing their emissions footprint, or companies not reporting on or investing in ESG	Demonstrate commitment to sustainability and climate risk management, pursue green financing options and grants when possible
Bribery & Corruption/Fraud	Misuse of climate-related funding can create opportunities for bribery, corruption, and fraud, resource scarcity can also increase corruption risks ³¹	Unlikely	Severe	Legal penalties, financial losses, and reputational damage can result from instances of bribery, corruption, or fraud	Strengthen internal controls and transparency, implement robust anti-corruption training and policies, conduct periodic audits, and include whistleblower protection policies
Cybersecurity/IT Infrastructure Resilience	Extreme weather events, can damage data centers, network infrastructure, and hardware, and exacerbate cybersecurity challenges, leading to data loss and disruptions in services ³²	Likely	Major	Data breach costs, system downtime, repairing or replacing damaged infrastructure, erosion of customer confidence, potential breach of contracts	Investment in climate resilient and adaptable IT infrastructure, enhance cybersecurity measures and employee training, ensure business continuity and emergency response and recovery plans remain updated and relevant

Risk Management

How we identify, assess, and manage climate-related risks.

To comprehensively assess each of the above-listed climate-related ESG impacts, we conducted a detailed risk and opportunity assessment based upon our climate scenario analysis. This assessment involved evaluating the likelihood of each risk occurring, its potential consequences on operations, finances, and business reputation, and identifying mitigation or adaptive strategies to manage these risks effectively and identify where opportunities lie. The approach we used was based on our unique operational footprint, geographic location, and strategic priorities. In mitigating any potential impacts, we incorporate industry best practices, leverage technological innovations, engage with our stakeholders, and strictly adhere to regulatory requirements, to not only alleviate risks, but also to identify and capitalize on related opportunities. Our risk management process for identifying and assessing climate-related risks and opportunities involves several key steps:

DEFINE SCOPE

We set the geographical boundaries for the assessment based on where our operations are located throughout Northern California, including inland and coastal communities.

RISK IDENTIFICATION

We recognize potential climate-related risks that could affect GreenWaste such as regulatory shifts, physical risks from extreme weather, and transition risks and opportunities associated with a low-carbon economy.

RISK CLASSIFICATION

We used the risk management framework in TCFD to define and classify risks and opportunities ensuring a standardized repeatable approach.

RISK ASSESSMENT

We evaluated the likelihood and potential consequence of each identified risk (or opportunity) considering both the direct and indirect effects on operations, finances, business reputation and compliance, and a risk matrix was created.

DATA COLLECTION

We reviewed historical and projected climate data to identify various climate stressors and select relevant climate scenarios for analysis.

SCENARIO ANALYSIS

We performed a climate scenario analysis to understand the potential impact of climate-related risks under different future conditions and RCPs to gauge future business resilience.

OVERALL RISK MANAGEMENT INTEGRATION

Climate-related risks are embedded into our broader risk management strategy, including our business continuity and resiliency plans, ensuring consistent review and updating as climate circumstances and regulations evolve.

REGULAR MONITORING AND REVIEW

The climate is evolving and dynamic; thus, climate-related risks and impacts will be regularly monitored, climate risk management strategies may be reassessed, relevant climate projections and regulations monitored, and ESG reporting updated accordingly.

STAKEHOLDER COMMUNICATION

Our analysis and findings receive Board and ELT review or discussion highlighting key risks, opportunities, and any recommended next steps. GreenWaste maintains transparency with relevant stakeholders about how we are managing climate risks and opportunities.

CLIMATE-RELATED METRICS AND TARGETS

Climate-related metrics are essential tools that should both influence and be shaped by GreenWaste's governance, strategic planning, and risk management frameworks. GreenWaste uses these climate-related metrics and key performance indicators (KPIs) to understand, measure, and track our performance in our emissions reductions strategies and in achieving our path to net zero goals. Tracking progress of our climate-related metrics ensures that climate considerations are dynamically integrated into our core business operations, enabling ongoing adaptation and refinement of strategies in response to evolving climate realities. So that our climate-related metrics continue to effectively inform our decisions and strategic planning and closely align with the specific risks and opportunities we face, these metrics may be adapted, or added to, over time, ensuring business resilience.

BY 2030, REDUCE TOTAL COMBINED SCOPE 1 AND SCOPE 2 EMISSIONS BY 45% FROM 2022 BASELINE. TARGET NET ZERO IN SCOPE 1 AND SCOPE 2 EMISSIONS BY 2040.

Measurement

We inventory and calculate our annual Scope 1 (direct emissions from our owned or controlled sources) and Scope 2 (indirect emissions from purchased energy) emissions, tracking progress against our 2022 baseline in accordance with the GHG Protocol Corporate Standard.³³

Performance Drivers

We developed and implemented a comprehensive emissions reduction and path to net zero strategy, focusing on fleet and equipment transition to renewable fuels and zero emissions, renewable energy sourcing and generation, building and operational energy efficiencies, electric grid transition to renewable sources, and technological innovations.

100% OF COLLECTION & HEAVY EQUIPMENT FLEET POWERED BY RENEWABLE OR ALTERNATIVE FUELS

Measurement

We track the percentage of the fleet and equipment powered by renewable or alternative fuels quarterly and categorize fuels by type.

Performance Drivers

We have completed the transition to renewable and alternative fuels to power our fleet and off-road equipment, subject to supply chain availability. We are implementing a phased replacement of our vehicles with zero emissions vehicles (ZEV) in accordance with the California Air Resource Board's Advanced Clean Fleet regulation. We also work with vehicle manufacturers to pilot new ZEV technologies.

INCREASE RENEWABLE ENERGY SOURCING

Measurement

The proportion of total electricity consumption sourced from renewable energy, including solar, is monitored and tracked using utility bills and records from our own renewable energy generation. We track kilowatt-hours (kWh) generated from on-site solar installations and the capacity of energy storage systems.

Performance Drivers

We continue to transition to renewable energy through direct green power purchases, investment in renewable energy projects and commercially feasible installations of solar panels and energy storage systems, and California's renewable electric grid transition. We also engage in energy use optimization practices to reduce overall energy consumption. Site feasibility studies to reduce electric grid use during peak demand times by expanding solar and battery energy storage systems are in progress.

ESG KPIS TIED TO EXECUTIVE PAY

Measurement

For our ESG team, which includes members of our ELT and SLT, we have specific ESG KPIs related to climate action and in alignment with our GHG emission reduction targets and path to net zero goals. Safety-related KPIs are embedded in our incentive performance program at all senior and executive leadership levels.

Performance Drivers

Performance is linked to achievement of KPIs. KPI progress is regularly reviewed and may be adjusted to align with strategic business goals.

Governance

GreenWaste's governance around climate-related risks and opportunities.

GreenWaste integrates ESG objectives and climate-related considerations into our corporate governance, management structure and strategy to help ensure alignment between our business objectives and broader sustainability goals.³⁴ By prioritizing sustainability and actively addressing climate-related impacts, we identify opportunities for growth and innovation while mitigating risks and enhancing our business resilience.

BOARD OF DIRECTORS

GreenWaste's Board provides strategic oversight and advice on various business matters, including climate-related issues, risks, and opportunities. Board Members serve on Environment and Sustainability (ESG), Risk, Finance & Audit (RFA), Growth and Strategy, and People committees. Each of these committees may consider ESG factors as part of their delegated authority and committee member duties and responsibilities.

ENVIRONMENT AND SUSTAINABILITY COMMITTEE

The ESG Committee's responsibilities, with delegated authority from the Board, include advancing sustainability and climate-related initiatives, adopting environmentally and socially responsible practices and plans, and overseeing systems and staff managing ESG and climate-related risks, opportunities, and impacts. The ESG Committee includes GreenWaste's Chief Executive Officer (CEO) as a member and General Counsel and Vice President of Human Resources as resources.

EXECUTIVE LEADERSHIP TEAM

In collaboration with the ESG Committee and GreenWaste's General Counsel, our CEO approves ESG goals and priorities, allocating company resources toward driving our commitment to sustainability and climate-related initiatives and embedding sustainability principles and climate considerations into GreenWaste's everyday operations, business strategies, and decision-making processes.

Along with the CEO, the Executive Leadership Team (ELT) is responsible for identifying, assessing impact of, mitigating risks of, integrating, and capitalizing on ESG and climate-related considerations in our business strategy, plans, policies, and operations.

SENIOR MANAGEMENT

The Senior Leadership Team (SLT), under the leadership of the ELT, implement sustainability measures at our facilities and operations, reducing our company's emissions footprint while improving our resilience to climate impacts and pursuing innovative waste management and recycling and reuse solutions.

ESG TEAM

Our General Counsel, also a member of the ELT, is responsible for setting the vision and strategy for our company's approach to ESG and climate-related issues, defining short and long-term goals, identifying key ESG priorities, and ensuring alignment with GreenWaste's mission and values. Reporting to the General Counsel, the ESG Director, supported by an ESG Analyst, leads the development, implementation, and compliant reporting of ESG and climate-related initiatives and objectives.

FINANCE TEAM

Led by our CFO, the team assesses the financial implications of climate risks and opportunities, including our business continuity plan and Own Risk and Solvency Assessment (ORSA), incorporating them into financial planning and investment decisions. They evaluate the cost-effectiveness of renewable energy investments and energy-efficient technologies and explore opportunities for financing mechanisms and tax credits to fund sustainability projects.

Endnotes

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- 11** Likelihood and consequence determine the overall risk level. Likelihood and consequence categories have been adapted from several resources including TCFD’s Guidance on Risk Management Integration and Disclosure (https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Risk-Management-Integration-and-Disclosure.pdf); IPCC’s degree of certainty evaluation in the Fifth and Sixth Assessment Reports (see citations); California’s Climate-Safe Infrastructure Working Group probabilistic risk assessment (CSIWG. 2018. Paying it forward: The Path Toward Climate-Safe Infrastructure in California. Report of the CSIWG to the California State Legislature and the Strategic Growth Council. Sacramento, CA: CNRA, Publication number: CN-RA-CCA4-CSI-001). Hicke, J.A., et al., 2022: North America. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 1929–2042, <https://doi.org/10.1017/9781009325844.016>.
- 12** In the IPCC’s Sixth Assessment Report, Shared Socio-economic Pathways (SSPs), along with RCPs, are utilized to assess how different global development scenarios might influence climate change impacts. SSPs are scenarios that describe possible future societies, focusing on factors such as demographic changes, economic development, and technological progress. RCPs outline what the climate impacts might be under different greenhouse gas trajectories, SSPs provide the societal contexts that might lead to those emissions scenarios.
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