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Purchasing for a Better Future:

Sustainable Procurement in the County of Santa Clara

by

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A Thesis Quality Research Project

Submitted in Partial Fulfillment of the Requirements

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BACKGROUND

The County of Santa Clara (SCC) is committed to the development of public policy and programs that contribute to sustainability, the act of "building and maintaining a healthy and safe community for current and future generations through preserving natural resources and the environment, fostering a healthy economy, and meeting the basic needs of all residents with respect and cultural awareness" (SCC, 2010, pg. 1). This definition of sustainability varies across local, state, and federal governments as well as the globe. However, it also conveys this simple fact: sustainability is a signal that "we really care about the Earth" (Silver, 2015, para. 13). More importantly, as it pertains to the public sector, it requires all public servants and elected or appointed officials to sincerely consider the ramifications of ignoring the environment and the consequences of its degradation on civil society (Silver, 2015). Fortunately, SCC is in pursuit of full integration of sustainability and unequivocally states, "all present and future county elected officials, administration and employees will recognize and respect the connections between economic, environment, social and health systems in meeting their explicit and implied responsibilities to current and future generations" (SCC, 2010, pg. 3).

The county's mission to become sustainable mimics an upwards trend and gravitation towards activist governments and companies that prioritize policy outcomes or practices tied to social welfare and "making the world a better place" (Patel, n.d.; Pew Research Center, 2014). Here, in these conditions, a growing interest in purchasing and public procurement has begun to emerge; individuals are becoming aware that their purchases and their governments' purchases "reflect their beliefs and values" (Patel, n.d., para. 19). As a result, policies, practices, programs, standards, and certifications tied to sustainable procurement have become salient and necessary

for the private and public sectors to demonstrate accountability as well as an active investment in the environment and future.

Some indicators that point to sustainable procurement and help determine whether governments or companies are committed to this trend include the following: limited or zero supply chain impacts, green product or service lifecycle management (PLM), internal corporate sustainability programs or projects, and corporate responsibility strategies. Limited or zero supply chain impacts refers to measured reductions in "air emissions, effluent waste, solid waste, and the consumption of toxic materials" throughout the supply chain to satisfy "customer demand for products and services that are environmentally sustainable" (Green, Zelbst, Meacham, & Bhadauria, 2012, pg. 290-291). Green product or service lifecycle management are products and services that are not only "'green' or 'ecologically driven'" in design, but also in delivery, manufacturing-production, and end-lifecycle (Vila, Abellán-Nebot, Albiñana, & Hernández, 2015, pg. 586). Alternatively, internal corporate sustainability programs or projects are in-house strategies that a company or organization employs to encourage a sustainable culture. Examples range from recycling and zero waste operations, composting, ride-sharing and alternative commuting incentives, telecommuting, energy efficiency actions, and double-sided printing. However, as sustainability becomes more popular, and as responsible business evolves these programs or projects, have led to corporate responsibility. Corporate responsibility is "about how a business conducts itself in all activities" and demonstrates a more holistic approach to alleviating "the challenges of climate change, resource depletion, and burgeoning global population" by creating "long-term shareholder value" that embraces opportunities and manages risks associated with environmental, economic, and social development (Rake & Grayson, 2009, pg. 394). Altogether, these indicators reveal a variety of innovative integration strategies and

approaches to purchasing and procurement that will impact whether there is a viable, thriving world in the future (SCC Office of Sustainability [OOS], 2018c).

In brief, this study aims to address sustainable procurement in SCC and its Procurement Department (PRC). A multi-varied analysis and discussion of market industries and the vendor community, present SCC policies and programs, and the overarching feasibility and environmental impact of sustainable procurement is provided to assist SCC in meeting its vision of sustainability. Procurement is a dynamic process, and for that reason, requires transformation and "strategic decision-making about how to best pursue and achieve long-term sustainability aims and goals" through SCC's purchasing vehicles (SCC OOS, 2018c, para. 4). Today, SCC, like many other governments, is grappling with the problems and threats of "a weaker economy, a growing income divide, a degraded environment, and a broken economy" (Pew Research Center, 2019, p.1). This study can potentially help PRC navigate sustainability as well as guide the department as it joins SCC in its cross-collaborative efforts to prevent and mitigate costs to the social welfare of its constituents via sustainable policies, programs, and practices. Accordingly, the central research question that will direct this study is as follows:

Research Question

Do SCC purchasing practices promote sustainability initiatives, support sustainability policies, and leverage sustainability practices employed by its vendor community?

Definitions

For the purposes of this study, the following definitions apply:

- Ariba = a solicitation and procurement management system in SCC (Meldoza, personal communication, December 16, 2019).

- Contract Release Purchase Order (CRPO) = a procurement of goods and related services, non-professional services, or professional services from an established contract, "an agreement between SCC and a non-county entity or individuals that contains a promise or set of promises or the mutual obligations of the parties" (SCC, 2015, pg. 2).

- Commodity Codes = a uniform economic "coding taxonomy" that classifies the various products and services that SCC procures to make the procurement process "more organized and more efficient" (SCC PRC, 2018, para. 1).

- Global Industry Classification Standard (GICS) = an industry taxonomy created and managed by Standards & Poor's and Morgan Stanley Capital International's (MSCI) that uses "earnings and market perception...across regions, market cap segments, sectors, and styles" to "capture the breadth, depth, and evolution of industry sectors" (MSCI, 2019, para. 5-10).

- National Institute of Governmental Purchasing (NIGP) Code = a specific coding taxonomy created and managed by NIGP that SCC uses "to classify products and services procured by SCC" and "provide control over procurement processes, making them more organized and more efficient" (SCC PRC, 2018, para. 1).

- Procurement = the act of purchasing goods, materials, or services.

- SAP = a financial, procurement, and contract management system in SCC that helps facilitate requisition-to-check purchasing processes (Meldoza, personal communication, December 16, 2019).

- Solicitation = "the process of seeking information, proposals, and quotations from" SCC vendors in a formalized form (e.g., a written or electronic document) (SCRC SME, 2018, para. 15).

- Standard Purchase Order (SPO) = an informal competitive procurement of goods and related services or non-professional services that is "up to a total contract value of $100,000" or of professional services that is "a contract value of no more than $100,000 per budget unit per fiscal year, unless a particular method of procurement is required for that service" (SCC, 2019a, pg. 6).

- Transactional Vendors = vendors that have provided goods and related services, non-professional services, or professionals to SCC via a pre-established contract or other procurement method (e.g., SPO, field purchase order (FPO), priority purchase order (PPO), and etcetera).

- United Nations Standard Products and Services Code (UNSPSC) Code = a specific coding taxonomy created and managed by the United Nations that SCC uses "to classify products and services procured by SCC" and "provide control over procurement processes, making them more organized and more efficient" (SCC PRC, 2018, para. 1).

LITERATURE REVIEW

There is a long history of public entities leveraging procurement to strategically promote "social and environmental goals" (Anna Corvaglia, 2016, pg. 610). The development of "procurement criteria and compliance" has become critical as traditional methods to promote social and environmental policy objectives have become ineffective at providing "incentives to encourage" the respect of "environmental standards and the adoption of good practice by private corporations" (Anna Corvaglia, 2016, pg. 612). As large consumers, governments have "a great potential to influence producers" and responsibility to ensure that their budgets steer procurement "decisions in a sustainable direction" (Bratt, Hallstedt, Robert, Broman, & Oldmark, 2011, pg. 309). At face value, procurement is a market transaction; however, it is also "a tool of social regulation" that organizations use to deliver and achieve policy objectives and outcomes (Keulemans & Van de Walle, 2017, pg. 329). Stakeholder pressures call for public entities to adopt and maintain a wise balance of "economic development, environmental stewardship, and social equity" through the strategic integration of sustainability in all procurement processes (Fayezi, Zomorrodi, & Bals, 2017, pg. 588). Consequently, the government has begun to exercise its authority to gain legitimacy in the market and to compel private organizations and constituents to contribute to the reduction of harmful production and consumption impacts (Oruezabala & Rico, 2012; Grandia, 2016).

Arguably, and more specifically, as the steward of taxpayer money, the government is responsible for condemning practices that may undermine commitments to the community, and instead for driving purchasing decisions that are "oriented towards reflecting the 'common good' and 'public interest'" (Anna Corvaglia, 2016, pg. 611). Strategic plans that outline stepwise approaches (e.g., principles, boundaries, creative stimulants, and smart investments) for

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sustainable procurement become instrumental in championing a sustainable society that meets its promised obligations and policy objectives (Bratt et al., 2011, pg. 310). Although public agencies may customize their goals, the following outcomes remain the primary targets for reduction: (1) concentrations of non-organic substances, (2) concentrations of pollutants produced by society, (3) degradation of the environment, and (4) exploitation of people systematically subject to the negative impacts of their environmental conditions (Bratt et al., 2011, pg. 310). Here, the procurement process becomes pivotal in the transformation of public and private organizational cultures, the evolution of sustainability "from a purely innovative idea to a de facto matter of thinking and doing business," and in meeting these goals (New, Green, & Morton, 2002; Roman, 2016, pg. 1048).

Additional research suggests that procurement, as a management approach, provides a "transitional route towards full sustainability" (Meehan & Bryde, 2011, pg. 95). Specifically, the procurement process effectively addresses "socio-economic and environmental impacts" through "strategy formulation and implementation" that extends "along an organization's supply chain" (Meehan & Bryde, 2011, pg. 95; Roumboutsos, 2010, pg. 165). Individually, as a direct participant in the market, public organizations can resolve ailments of society through procurement, outside of "design and financial support," and thus in this action, demonstrate their role as a persuasive political institution that drives "production and consumption trends" and "encourage[s] the demand [for] environmentally friendly products and services" (Testa, Annunziata, Iraldo, & Frey, 2016, pg. 1893; Lubell, Feiock, & Ramirez, 2005). The adoption of purchasing practices that address "long-term decision making, measurement of cross-generational impact, and concern for intergenerational equity and the welfare of future generations" points to effective "change implementation and reinforcement" of sustainable

policies that are otherwise lost across energy, construction, transportation, and agricultural industries (Wang, Hawkins, Lebredo, & Berman, 2012, pg. 842). These positive attributes point to successful green supply chain and purchasing initiatives; however, there remain significant challenges in the "logistics, product and process design, and operations strategy" within procurement and supply chain management (New et al., 2002, pg. 93).

The decision to pursue and implement environmental standards in procurement "has the potential to generate distortive and discriminatory effects" on competition and "market access dynamics," and thus, can result in trade barriers (Anna Corvaglia, 2016, pg. 607). These effects, reflective of a standard, limited impact perspective, continue to emphasize public agencies' unclear definitions of sustainability and objectives to mitigate the short and long-term effects of environmental degradation (Bratt et al., 2011, pg. 309). Furthermore, the slow, unsupportive nature of government to promote innovative solutions and the "uptake of green procurement" highlights a lack of commitment and competence, unclear and complicated bureaucratic processes, and fear that suppliers may appeal or pursue litigation (Bratt et al., 2011, pg. 310). It also indicates an unwillingness for executive leadership and top-level staff to pursue sustainable procurement, which limits the ability of public procurement to become a "driver of innovation and value creation," and, consequently, remains reliant on the current market and private, third-parties to establish eco-friendly or sustainable standards, products, and services (Bratt et al., 2011, pg. 310).

Although these negative attributes predominantly point to the government as the culprit, research is careful to illustrate how procurement professionals are "inundated with multi-stakeholder claims and tensions" and struggle to resolve sustainability tensions and needs (Fayezi et al., 2017, 587). Supplier selection becomes increasingly difficult and time-intensive as

more criteria are required to adequately assess the environmental impact that goods or services may have, and that encourage competition and participation. Expecting procurement professionals to "carry out direct comparisons between environmental and economic performance" for every purchase is unrealistic (Igarashi, De Boer, & Michelsen, 2015, pg. 448; Hueskes, Verhoest, & Block, 2017). Even then, for sustainable procurement to become remotely effective, professionals must learn how to balance environmental demands, budget impact, and strategic buying in the area of sustainability and environmental issues (Igarashi et al., 2015, pg. 448). Unfortunately, many organizations do not fully embrace sustainability, and as a result, fail to unlearn old behaviors and to eradicate practices that may compromise their environmentally-oriented goals and agenda (Meehan & Bryde, 2011; Wang et al., 2012).

Overall, the feasibility of implementing aggressive sustainable policies and practices requires thorough consideration. Many small, less-developed public entities are technically and financially ill-equipped to undertake a sustainability program within their purchasing system and thus, must shift the responsibility of sustainability to larger, socio-economically wealthier cities and municipalities that are less likely to bear the burden of environmental impacts (Lubell, Feiock, & Handy, 2009, pg. 293). Lack of clarity in business operations or other procurement-related organizational elements, and their relationship to sustainable outcomes, deters sustainable initiatives (Lozano, 2012). Furthermore, while "sustainable procurement objectives are often pursued to offset the negative consequences of production and consumption," policies often "sharply contrast with the principle of economy and choosing the cheapest bidder" (Keulemans & Van de Walle, 2017, pg. 329). Additionally, there are substantial differences in how organizations "perform on key aspects of public procurement" and integrate policy (Keulemans & Van de Walle, 2018, pg. 330). Governments can introduce environmental criteria to create

positive environmental outcomes, but limited knowledge about "the use of criteria rather than price" for awarding vendors may impact the legitimacy of their procurement practices (Keulemans & Van de Walle, 2018, pg. 329). Therefore, for organizations to introduce new requirements or specifications, they must (1) preserve equity, integrity, and economy and efficiency, and (2) shape procurement processes and practices to reflect their community's social and socio-economic conditions, as well as personal values and beliefs tied to sustainability (Patel, n.d.; Keulemans & Van de Walle, 2018).

Looking to the private sector, the growing "emergence of non-state mechanisms" to regulate markets signals a trending consideration of the impact that production and delivery of goods and services have on the environment (Anna Corvaglia, 2016, pg. 609). The increasing "demand for private actors to take responsibility" for supply chain management (SCM) has resulted in the establishment of "ethical and environmental" objectives to achieve a green supply chain marketable to consumers (Anna Corvaglia, 2016, pg. 609). As "corporate leaders and employees have begun to recognize the relations and interdependencies" of their financial health and social and environmental outcomes, they have begun to embrace sustainability and lead voluntary initiatives (Lozano, 2012, pg. 14).

Collectively, sustainability has become more of an opportunity and less of a problem for business (New et al., 2002). Not only do private organizations avoid cynical public relations (e.g., bad publicity), but they have begun to leverage green aspects of a business to improve purchasing and supplier relationships by advancing transnational private regulation, standards, and certifications critical to sustainable procurement (New et al., 2002; Anna Corvaglia, 2016). These fruitful opportunities have become abundantly clear as governments struggle "to achieve timely implementation" of sustainability goals and delegate sustainability efforts and

responsibilities to contractors or third-parties (Terman & Feiock, 2014, pg. 322). Although

sustainability may pose a competitive advantage and mark a profitable market niche in the public

and private sector, private corporations commonly share sustainable supply chain management

practices across industries and with competitors, symbolizing a supportive, sustainably-oriented

culture (Bryson & Lombardi, 2009; Walker & Jones, 2012). Assumptions that sustainable

activity "has been driven through the statutory necessity of environmental management" erode as

private entities demonstrate their power and unique position to drive sustainability in arenas with

less visibility and regulation (Meehan & Bryde, 2011, pg. 96). Consequently, the private sector

joins the public in buying into "satisfying the needs of today's societies without compromising

the needs of tomorrow's societies" (Lozano, 2011, pg. 14).

METHODOLOGY

Part I: Baseline Survey and Non-Experimental Correlational Regression Analysis

Part I will address whether the SCC purchasing practices promote sustainability initiatives. The quantitative, mixed-design method of a survey and Ordinary Least Squares regression will offer a baseline of SCC's sustainable purchasing environment (Sylvia & Sylvia, 2012). Additionally, the findings in this analysis will help with the development of a policy recommendation in Part III: Policy Recommendation and further discussion of its feasibility in Part IV: Feasibility Analysis.

Hypothesis

There is a relationship between higher spend and transactional county vendors who not only comply with countywide sustainable policies, but also develop and promote sustainable initiatives. The following factors promote sustainability initiatives in SCC: (1) limited or zero supply-chain impacts, (2) green lifecycle product and/or service management, (3) internal sustainability programs and/or projects, and (4) corporate responsibility strategies.

Null Hypothesis

There is no relationship between higher spend and transactional county vendors who not only comply with countywide sustainable policies, but also develop and promote sustainable initiatives. The following factors do not promote sustainability initiatives in SCC: (1) limited or zero supply-chain impacts, (2) green lifecycle product and/or service management, (3) internal sustainability programs and/or projects, and (4) corporate responsibility strategies.

Data Source and Unit of Analysis

Data for this baseline analysis was collected from a spend analysis conducted in October 2019. The spend analysis included a sample of 681 UNSPSC and NIGP commodity codes associated

with transactional vendors and identified in a combined invoice spend report of SCC's one-time

SPOs and CRPOs between January 1, 2014, and October 17, 2019 in SAP and Ariba, two of

SCC's financial and contract management systems. Only 25 of the 681 commodities were

included for both invoiced spend reports. These 25 commodities were identified based on top-

spend by commodity and assigned to one of the 68 market industries by the GICS to consolidate

and resolve commodity overlap. Note, there was a combined total of 43 unique commodity codes

between one-time SPOs and CRPOs. From here, and following a similar pattern to the above

method, only 10 of the 68 market industries were included for both invoice spend reports. These

10 market industries were identified based on top-spend by industry. Here, there was a combined

total of 13 unique market industries between one-time SPOs and CRPOs. See Tables 1.1 and 1.2.

Table 1.1: Ten Top-Spend Market Industries in the County of Santa Clara - One-Time Standard Purchase Orders

10 Top-Spend Industries in the County of Santa Clara		
One-Time Standard Purchase Orders		
GICS Sector	GICS Market Industry	Total Industry SPO Spend
Consumer Discretionary	Automobiles	$ 18,400,013.36
Health Care	Health Care Equipment and Supplies	$ 17,412,827.46
Information Technology	IT Services	$ 12,672,506.82
Information Technology	Technology Hardware, Storage and Peripherals	$ 6,800,059.64
Consumer Discretionary	Household Durables	$ 6,683,367.49
Industrials	Construction and Engineering	$ 4,540,481.14
Information Technology	Electronic Equipment, Instruments and Components	$ 4,021,343.20
Materials	Construction Materials	$ 1,873,835.95
Communciation Services	Interactive Media and Services	$ 1,593,785.82
Industrials	Professional Services	$ 1,375,283.96
Consumer Staples	Food & Staples Retailing	$ 1,363,202.08

Table 1.2: Ten Top-Spend Market Industries in the County of Santa Clara - Contract

Release Purchase Orders

10 Top-Spend Industries in the County of Santa Clara		
Contract Release Purchase Orders		
GICS Sector	GICS Market Industry	Total Industry CRPO Spend
Information Technology	Software	$ 96,793,971.83
Industrials	Commerical Services and Supplies	$ 65,453,399.33
Information Technology	IT Services	$ 58,280,903.71
Health Care	Health Care Equipment and Supplies	$ 39,783,351.99
Consumer Discretionary	Household Durables	$ 18,965,809.80
Utilities	Gas Utilities	$ 11,572,131.36
Materials	Construction Materials	$ 10,403,549.95
Information Technology	Technology Hardware, Storage and Peripherals	$ 10,403,549.95
Communciation Services	Diversified Telecommunication Services	$ 8,480,977.00
Industrials	Professional Services	$ 7,022,640.20
Information Technology	Electronic Equipment, Instruments and Components	$ 5,706,628.47

Leveraging this spend analysis, there was a two-pronged approach to data collection. First, a non-randomized sample of transactional county vendors who fell into the ten top-spend market industries for both one-time SPOs and CRPOs were asked to complete and participate in a survey. The sample survey was administered between January 10, 2020 and February 7, 2020 via MailChimp. Responses were recorded using SurveyMonkey. See Appendix A at the end of the research report and Exhibit 1.1 at the end of the Conclusion section for details. It is important to note that there was an 8% response rate for the successfully-administered survey. From the total of 546 transactional vendors, 27 responded, 291 were non-responsive, 23 had 'bad' or outdated contact information, and 61 did not have contact information listed for surveying and outreach. Of the 27 respondents, 27 respondents were one-time SPO transactional vendors and four respondents were CRPO transactional vendors with a crossover of four transactional vendors (e.g., four were both one-time SPO and CRPO transactional vendors). The unit of analysis was the individual transactional vendor. Secondly, a randomized sample of 50 transactional county vendors who fell into the ten top-spend market industries for both one-time SPOs and CRPOs

were queried via the internet and using keyword search terms such as sustainability, sustainable, corporate responsibility, social responsibility, environment, and environmental. Responses were recorded using publicly available information that reflected the vendor's pursuit of sustainability initiatives. The unit of analysis was the individual transactional county vendor.

Dependent Variable

There are two dependent variables in this baseline analysis: (1) CRPO invoiced spend by industry, and (2) SPO invoiced spend by industry.

Independent Variable

There is one independent variable in this analysis: (1) sustainability initiative. The surveying technique used to collect sustainability initiative measurements is explained below.

Again, these measurements were collected two ways: through (1) a survey to all non-randomly selected transactional vendors and (2) an online query of 100 randomly selected transactional county vendors who fell within SCC's ten top-spend market industries for both one-time SPOs and CRPOs. As a preliminary step, a spend analysis of SCC was conducted and lent itself to identification of these transactional vendors. Transactional vendors who fell into ten top-spend market industries for both one-time SPOs and CRPOs in SCC were counted for inclusion, as shown in Table 1.1 and 1.2. The survey was administered to a total of 546 out of 5,624 unique transactional vendors between January 1, 2014 and October 17, 2019. Of the 546 transactional vendors, 175 were from CRPOs and 403 were from one-time SPOs, with a crossover of 51 transactional vendors. To facilitate data collection, the survey was hosted in SurveyMonkey and disseminated by direct contact leveraging Outlook and MailChimp, an in-house tool that staff use for targeted email campaigns and vendor outreach efforts. Furthermore, the mailer script included information about why the vendor is receiving the survey, what their

response will be used for, as well as links to the survey and answers to anticipated, frequently-asked questions. Additionally, to comply with IRB guidelines, the survey included a disclosure statement that read, "your participation in this survey is completely voluntary and all vendors are encouraged to participate" (Morestin, 2012). See Exhibit 1.1 following the Conclusion section for details and Appendix A at the end of this report. Alternatively, for the second approach, a total of 100 out of 546 unique transactional vendors were queried online between March 9, 2020 and March 13, 2020. Of the 100 randomly selected transactional vendors, 50 were from CRPOs and 50 were from one-time SPOs, with a crossover of 21 transactional vendors. To facilitate data collection, the aforementioned keyword search terms were inserted into the vendors' websites and Google.

For the survey, the first question asked, "which of the following sustainability initiatives does your company currently employ and/or pursue in your business?" Vendors were prompted to self-declare and choose one or more options from the following list: (A) "limited or zero supply chain impacts (e.g., environmentally friendly choices in supply-chain to avoid toxic waste, water pollution, loss of biodiversity, deforestation, long-term damage to ecosystems, greenhouse gas (GHG) emissions, etc.), (B) green product and/or service lifecycle management (PLM) (e.g., end-to-end management of raw material supply, manufacturing, packaging, distribution and storage, consumption, and end-of-life), (C) internal corporate sustainability programs and/or projects (e.g., recycling and zero waste, composting, ride sharing and alternative commuting incentives, telecommuting, energy efficiency, double sided printing, etc.), (D) corporate responsibility strategies (e.g., volunteering, activism, charitable contributions, consumer and employee incentives, etc.), (E) none, (F) other (please specify)."
The measurements included in the analysis were as follows:

- Total number of vendors that selected limited or zero supply-chain impacts;

- Total number of vendors that selected green product and/or service lifecycle management;

- Total number of vendors that selected internal sustainability programs and/or projects;

- Total number of vendors that selected corporate responsibility strategies;

- Total number of vendors that selected none; and

- Total number of vendors that selected other (please specify).

The second question in the survey asked, "which of the following sustainability initiatives does your company plan to use and/or pursue in the future?" Vendors were prompted to self-declare and choose one or more options from the following list: (A) "limited or zero supply chain impacts (e.g., environmentally friendly choices in supply-chain to avoid toxic waste, water pollution, loss of biodiversity, deforestation, long-term damage to ecosystems, greenhouse gas (GHG) emissions, etc.), (B) green product and/or service lifecycle management (PLM) (e.g., end-to-end management of raw material supply, manufacturing, packaging, distribution and storage, consumption, and end-of-life), (C) internal corporate sustainability programs and/or projects (e.g., recycling and zero waste, composting, ride sharing and alternative commuting incentives, telecommuting, energy efficiency, double sided printing, etc.), (D) corporate responsibility strategies (e.g., volunteering, activism, charitable contributions, consumer and employee incentives, etc.), (E) none, (F) other (please specify)."
The measurements included in the analysis were as follows:

- Total number of vendors that selected limited or zero supply-chain impacts;

- Total number of vendors that selected green product and/or service lifecycle management;

- Total number of vendors that selected internal sustainability programs and/or projects;

- Total number of vendors that selected corporate responsibility strategies;

- Total number of vendors that selected none; and

- Total number of vendors that selected other (please specify).

Finally, responses to the following additional questions were leveraged to help meet department goals unrelated to the study: (1) "please describe the goods and/or services your company provides, (2) please select your industry from the list below, (3) what kind of information does your company want to receive from the County of Santa Clara Procurement Department, and (4) how would your company like to receive information such as: policy updates, business opportunities, upcoming events, and other county news?" Questions (1) and (3) are open comments whereas questions (2) and (4) prompt vendors to choose one or more options from an accompanying list, as shown in Appendix A.

For the online query, only publicly available information that demonstrated that the vendor currently employs and/or pursues sustainability initiatives in their business was considered. Data was recorded using web pages, written content, or policies that reflected one or more options from the following list: (A) "limited or zero supply chain impacts (e.g., environmentally friendly choices in supply-chain to avoid toxic waste, water pollution, loss of biodiversity, deforestation, long-term damage to ecosystems, greenhouse gas (GHG) emissions, etc.), (B) green product and/or service lifecycle management (PLM) (e.g., end-to-end management of raw material supply, manufacturing, packaging, distribution and storage, consumption, and end-of-life), (C) internal corporate sustainability programs and/or projects (e.g., recycling and zero waste, composting, ride sharing and alternative commuting incentives, telecommuting, energy efficiency, double sided printing, etc.), and (D) corporate responsibility

strategies (e.g., volunteering, activism, charitable contributions, consumer and employee incentives, etc.)."

The measurements included in the analysis were as follows:

- Total number of vendors that have limited or zero supply-chain impacts;

- Total number of vendors that have green product and/or service lifecycle management;

- Total number of vendors that have internal sustainability programs and/or projects; and

- Total number of vendors that have corporate responsibility strategies.

Part II: Gap Analysis

Part II will address whether SCC purchasing practices support sustainable policies. The qualitative method of a gap analysis between SCC and the City of Portland (COP), a leader in sustainable procurement, will help identify gaps in the SCC's current sustainable purchasing regulations, policies, and programs (Sylvia & Sylvia, 2012). See Exhibit 2.1 and 2.2 following the Conclusion section for details. The combined findings of Part I: Baseline Survey and Non-Experimental Correlational Regression Analysis and Part II: Gap Analysis will further assist in the identification of sustainable purchasing goals and policy action for SCC in Part III: Policy Recommendation. Supporting research will be collected via the (1) SCC specific reports and/ or documents, (2) SCC public-facing web pages, and (3) literature searches (Sylvia & Sylvia, 2012).

Part III: Policy Recommendation

Part III will address how SCC can leverage sustainability practices employed by its vendor community and COP to develop purchasing practices that support sustainable policies and meet countywide sustainability goals. The spend analysis conducted in October 2019 and findings from Part I: Baseline Survey and Ordinary Least Squares Regression and Part II: Gap Analysis

will offer insight into vendor reception, and provide guidance for the application of sustainable purchasing (Sylvia & Sylvia, 2012). Supporting research will be collected via the (1) SCC specific reports and/ or documents, (2) SCC public-facing web pages, (3) conversations with internal SCC staff, and (3) literature searches (Sylvia & Sylvia, 2012).

Part IV: Feasibility Analysis

Part IV will address the impact of SCC implementing sustainable purchasing practices. The qualitative method of a feasibility analysis will reference the spend analysis conducted for the survey and regression analysis in Part I: Baseline Survey and Non-Experimental Correlational Regression Analysis, to confirm whether the recommended policy and its implementation are possible in procurement. Further, it will discuss the operations of the final, recommended policy and, at a high-level, the organizational structure including personnel, scheduled sequence of activities, systems used, and instruments to evaluate policy goals and controls for the new policy (Sylvia & Sylvia, 2012). The analysis will also justify and assess the (1) implementation of a sustainable procurement policy and (2) the status-quo to determine whether the final, recommended policy in Part III: Policy Recommendation can reduce SCC's environmental impact. Again, supporting research will be collected via the (1) SCC-specific reports and documents, (2) SCC public-facing web pages, (3) conversations with internal SCC staff, and (3) literature searches (Sylvia & Sylvia, 2012).

FINDINGS

Part I: Baseline Survey and Non-Experimental Correlational Regression Analysis

Table 2.1: Transactional Vendor Survey

	Survey Results											
	Present Sustainability Inititatives						Future Sustainability Initatives					
	Limited or Zero Supply Chain Impact	Green Product and/or Lifecycle Management (PLM)	Internal Corporate Responsibility Programs and/or Projects	Corporate Responsibility Strategies	None	Other (Please Specify)	Limited or Zero Supply Chain Impact	Green Product and/or Lifecycle Management (PLM)	Internal Corporate Responsibility Programs and/or Projects	Corporate Responsibility Strategies	None	Other (Please Specify)
	A	B	C	D	E	F	A2	B2	C2	D2	E2	F2
SPO	7 (26%)	10 (37%)	15 (56%)	19 (70%)	2 (.07%)	0 (0%)	9 (33%)	9 (33%)	13 (48%)	18 (67%)	1 (.04%)	1 (.04%)
CRPO	1 (25%)	2 (50%)	2 (50%)	2 (50%)	0 (0%)	0 (0%)	0 (0%)	2 (50%)	2 (50%)	1 (25%)	0 (0%)	0 (0%)
Combined	7 (26%)	10 (37%)	15 (56%)	**19 (70%)**	2 (.07%)	0 (0%)	9 (33%)	9 (33%)	13 (48%)	**18 (67%)**	1 (.04%)	1 (.04%)

Because of non-responsiveness and a small sample size, survey responses were not used to conduct a non-experimental correlational regression analysis. Nonetheless, as supporting research, individual feedback was aggregated to assist in a more comprehensive, mixed design baseline assessment of sustainability in SCC and among its transactional vendors. As Table 2.1 demonstrates, corporate responsibility strategies are a popular approach to sustainability, with 70% of respondents currently employing these strategies, and 67% intending to continue or supplement their pursuit of sustainability through volunteering, activism, charitable contribution, and consumer and employee incentives. Further, only .07% of respondents do not practice sustainability in their company, and .04% do not intend to incorporate sustainability in the future. Moreover, aside from the low response rates in the categories 'none' and 'other (please specify),' all other categories that measure sustainability are equal to or above 26%. Lastly, and not reflected in Table 2.1, are the list of representatives who provided feedback. Most, if not all company representatives held a high-level position as 'CEO,' 'President,' 'Vice President,' and 'Director.' Other representatives included 'Sales Manager,' 'Account Manager,' and 'Fleet and Inventory Manager.' Altogether, these survey results suggest that sustainability is not a foreign concept and SCC's transactional vendors practice sustainability in their companies.

Table 3.1: Model 1 - One-Time Standard Release Purchase Orders

Model 1 Summary			
R	**R Square**	Adjusted R Square	Std. Error of the Estimate
.239ᵃ	**0.086**	.004	$92,233.72

a. Predictors: (Constant), Sustainability Initiatives: Supply Chain Management (SCM), Product Lifecycle Management (PLM), Internal Programs or Projects, and Corporate Responsibility

Coefficients					
	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	$ 1,706,527.98	$ 595,182.86		2.867	.006
Supply Chain Management	$ (302,355.90)	$ 1,708,865.22	$ (3.75)	-1.769	0.084
Product Lifecycle Management	$ 2,423,669.61	$ 1,900,119.53	$ 0.30	1.276	0.209
Internal Programs or Projects	$ (2,209,245.80)	$ 28,228,098.03	$ (0.31)	-0.783	0.438
Corporate Responsibility	$ 17,538,064.48	$ 2,598,495.71	$ 0.25	0.677	0.502

a. Dependent Variable: Total One-Time Standard Purchase Order (SPO) Invoiced Spend in SAP and Ariba

Model 1 does not support the hypothesis, and thus, the research supports and accepts the null hypothesis that there is no relationship between higher spend and transactional county vendors who not only comply with countywide sustainable policies, but also develop and promote sustainable initiatives. Further, it reflects a negative relationship between vendors' (1) SCM strategies (e.g., limited or zero supply chain impacts) and (2) internal programs or projects and SCC's spend. For example, the sustainability indicator, SCM, is almost statistically significant with a 0.084 coefficient and T-score of -1.769. Had SCM been statistically significant to the 95% confidence interval with a coefficient of .05 or less and a T-score between -1.96 and 1.96, for every unit increase in the number of vendors who currently have SCM strategies in place, there would be a $302,255.90 decrease in county spend for their goods or services. Even so, this model only reflects 8.6% of the variation between SCC's spend and vendors' sustainability indicators. Consequently, this low percentage suggests that data including the vendors' size, available resources, industry, and information not made publicly available may have collectively impacted the r-squared and findings.

Table 3.2: Model 2 - Contract Release Purchase Orders

Model 2 Summary			
R	**R Square**	Adjusted R Square	Std. Error of the Estimate
.147[a]	**0.022**	-0.065	$3,558,040.45

a. Predictors: (Constant), Sustainability Initiatives: Supply Chain Management (SCM), Product Lifecycle Management (PLM), Internal Programs or Projects, and Corporate Responsibility

Coefficients					
	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	$ 1,136,916.47	$ 665,049.05		1.71	0.094
Supply Chain Management	$ (28,200.83)	$ 1,691,803.16	$ (0.00)	-0.017	0.987
Product Lifecycle Management	$ (524,628.12)	$ 2,047,518.36	$ (0.07)	-0.256	0.799
Internal Programs or Projects	$ 1,693,876.65	$ 2,414,366.97	$ 0.24	0.702	0.487
Corporate Responsibility	$ (386,899.50)	$ 1,874,768.60	$ (0.06)	-0.206	0.837

a. Dependent Variable: Total Contract Release Purchase Order (CRPO) Invoiced Spend in SAP and Ariba

Like Model 1, Model 2 does not support the hypothesis, and thus, the research supports and accepts the null hypothesis that there is no relationship between higher spend and transactional county vendors who not only comply with countywide sustainable policies, but also develop and promote sustainable initiatives. Moreover, and slightly different from its CRPO counterpart, this model reflects a negative relationship between vendors' (1) PLM and (2) corporate responsibility strategies as well as (3) SCM strategies and SCC's spend. That said, this model only reflects 2.2% of the variation, even less than 8.6% in Table 3.1. Again, this r-square and the resulting findings were likely impacted by missing data, such as the vendors' size, available resources, industry, and information not made publicly available.

Part II: Gap Analysis

County of Santa Clara

The SCC Ordinance Code sets the foundation for procurement and sustainability in SCC. See Exhibit 2.1 at the end of the Conclusion section for details. In the SCC Ordinance Code, several ordinances formalize the delegation of purchasing authorities and standards of conduct, as well as identify "key statutes, rules, and regulations" dictating residents' actions that may potentially impact SCC's sustainability efforts (e.g., pollution, waste, and resource management, urban and agricultural development, and preservation) (SCC, 2012, pg. 10; SCC, 2018a). These ordinances include:

- Title A - General and Administration with Division A34 - General Services Agency and Chapter VI - Purchasing that establishes the Director of Procurement (DOP) and delegates purchasing authority and standard, procurement-related actions to appropriate personnel (SCC, 2018a).

- Title A - General and Administration with Division A33 - Environmental Resources Agency and Chapter II - Department of Planning and Development, Chapter V - Department of Agriculture and Resource Management, and Chapter VI - Department of Environmental Health, all of which touch sustainability directly or indirectly (SCC, 2018a). An organization that falls under Chapter II - Department of Planning and Development is the Facilities and Fleet Department (FAF), a department charged with a variety of county sustainability measures such as: energy, transportation, water, zero waste, climate action planning, and sustainability in capital projects (SCC FAF, 2020).

- Title A - General and Administration with Division A11 - County Executive and its subdivisions, Office of Occupational Safety and Environmental Compliance (OSEC),

OOS, and the Local Agency Formation Commission (LAFCO). Within Division A11 - County Executive, and of particular importance, is OOS and LAFCO. The first agency fosters and spearheads interdepartmental coordination and external-facing countywide sustainability efforts and, the second, an independent state agency, aims to protect "open spaces, parks, hillsides, and farmlands," encourage "sustainable growth," and safeguard "local air and water resources" (SCC OOS, 2020a, para. 3; Santa Clara LAFCO, 2020, para. 1).

- Title B - Regulations and Title C - Construction, Development, and Land Use with a total of ten divisions that regulate individual contributions to the degradation or mismanagement of the environment in day-to-day activities (e.g., pesticide use and pest management) or during construction, development, and land use (SCC, 2018a).

Further, and providing an operational framework, are many county policies that introduce "roles, responsibilities, and accountabilities" for sustainability efforts in SCC (SCC, 2012, pg. 10).

Echoing the previous discussion, SCC is committed to addressing the interrelated elements - "a healthy environment, vibrant economy, and social equity" - in its development of sustainable "public policy and programs that pursue a thoughtful, balanced approach when interests compete" (SCC OOS, 2018b, pg. 2; SCC, 2010). To date, SCC has a total of 20 sustainability-related policies, of which SCC has amended three and deleted five. See Exhibit 2.1 following the Conclusion section. The remaining 15 policies, including those that SCC amended, are authored to obtain outcomes such as improving energy efficiency and development, introducing renewable resources, lowering fuel emissions, and reducing waste and stormwater runoff (SCC, 2018b). In support of Board Policy 8.4 - Zero Waste for County Facilities and Operations- is one such administrative policy, the Surplus Personal Property Disposal Policy,

that mandates the "reuse/ reallocation, sale, donation, or other disposition of county-owned surplus personal property" and "aligns operations, sets behavioral expectations countywide, and communicates policy roles and responsibilities" (SCC, 2013, pg. 1; SCC, 2012, para. 2).

One of the deleted policies included in Exhibit 2.1 is the Environmentally Preferable Purchasing Policy (EPP) that sought to introduce the purchasing "Environmentally Preferable Products and Services" policy (SCC, 2009, pg. 1). See Appendix B at the end of the research report. The EPP outlined goals such as having a lesser or reduced effect on the environment and human health, conservation of county water and natural resources, and preservation of biodiversity via purchasing choices (SCC, 2009). Further, the policy aimed to encourage purchases that included products and services that met or exceeded current state and federal sustainability standards, or purchases that were offered by suppliers who demonstrated a commitment to SCC's sustainability goals through supply chain management, product lifecycle management, or corporate responsibility strategies (SCC, 2009). However, on February 28, 2012, the Office of the County Executive (CEO) recommended amendments to Board Policy 5 - Policies on Soliciting and Contracting and deleted the EPP (SCC, 2012). Unfortunately, despite good intentions, the policy was too vague, restrictive, and put a financial burden on SCC, and, since its removal, there has been no reintroduction of a procurement-led sustainability policy (Wasserlauf, personal communication, March 4, 2020).

Adding to the list of county ordinances and policies are a variety of in-house projects and programs that further propel regulatory and government oversight of sustainability in SCC. As mentioned previously, OOS and FAF lead SCC's sustainability initiatives. Today, there are eighteen ongoing sustainability-related projects and programs in SCC. See Exhibit 2.1 following the Conclusion section. Of those projects and programs, eight are devoted to commuter-related

sustainability efforts and aim to reduce the amount of GHG emissions caused by vehicles (e.g., emissions from idling, sitting in traffic, and traveling long distances) by offering carpooling, public and alternate transportation employee benefits, and electric vehicle charging stations (SCC OOS, 2020c). Two programs, the BayREN Energy Incentive Program and Silicon Valley Clean Energy, and one project, the Renewables for Revenue Project (R4R), target homeowners, neighboring municipalities, and county-owned properties to increase renewable energy use through incentives, implementation plans, and solar panel installations (SCC OOS, 2019; SCC OOS, 2018a). Another project, the Civic Center Master Plan, and one program, Sustainable Landscape Management, focus on "the framework for development and redevelopment within the Civic Center's 55-acre area for many years to come" and, in tandem, "a whole-system approach to the design, construction and maintenance of sustainable landscapes" throughout SCC "to support the integrity of the regional watershed and local ecology" (SCC FAF, 2018, p.1; SCC Sustainable Landscape Management [SLM], 2017, p.4). Further, there are two programs, the Sustainability Master Plan (SMP) and Sustainable County Working Group, that have produced a dynamic and comprehensive approach to creating a system, including plans and reports, "to both communicate the county's vision for sustainability and to implement that vision through the county's many activities, goods, and services" (SCC OOS, 2018c, para. 3-4). Finally, there is the Environmental Stewardship Goals (ESG) and County Climate Coalition that demonstrate SCC's regional and global commitment to sustainability and combating climate change through its counterparts, the Bay Area Climate Change Compact (BACC) and Al Gore's Climate Reality Project, and the United Nations Paris Climate Agreement (SCC OOS, 2018b; SCC OOS, 2020b).

City of Portland

Similar to SCC, COP has its City Charter and Code that lays the foundation for procurement and

the city's sustainability efforts. See Exhibit 2.2 following the Conclusion section. This charter

establishes its existence, as well as declares provisions "for the administration of the powers,

duties and affairs of the different departments," their organizations, and the collective entity

(COP, 1962). Contained under the Charter's Title 3 - Administration, is Chapter 3.13 Bureau of

Environmental Services (BES), Chapter 3.15.070 Bureau of Revenue and Financial Services

(BRFS), Chapter 3.24 - Portland Water Bureau (PWB), and Chapter 3.33 - Bureau of Planning

and Sustainability (BPS) (COP, 2020b). The city charges BRFPS with oversight and facilitation

of the city's procurement activities (COP BRFS, 2020). The city also delegates responsibility to

BES and PWB to manage its waterways, including drinking water, sewage, wastewater, and

stormwater. In comparison, an entity separate from SCC, the Santa Clara Valley Water District

(SCVWD), ensures the wholesale delivery of clean drinking water and flood protection within

SCC (COP, 2020b; SCVWD, 2020). Individual cities within SCC have planning departments

and water utilities that have many of the same programs and policies as COP at the municipal

level. However, in COP, ultimately it is BPS that leads the city in ushering in environment-

related innovation and climate change protection for current and future generations (COP BPS,

2020a). See Exhibit 2.2 following the Conclusion section. The charter also includes Title 7 -

Business Licenses with Chapter 7.07 - Portland Clean Energy Community Benefits, which

mandates that a portion of the city's revenue is directed towards clean energy projects (COP,

2020b). Additionally, there is Title 10 - Erosion and Sediment Control Regulations, Title 11 -

Trees, Title 16 - Vehicles and Traffic, and Title 33 - Planning and Zoning that set forth permits,

plans, and requirements to limit individuals' impact on the environment and promote a

sustainable culture in the city (COP, 2020b). Lastly, the city has codes devoted to water under

Title 21 - Water, including Chapter 21.32 - Water Conservation Measures, Chapter 21.35 -

Wellhead Protection, and Chapter 21.36 - Bull Run Watershed Protection (COP, 2020b). The

COP charter assigns responsibility for citywide water management to COP and, thus, the city has

many resulting policies that are non-existent in SCC, where cities similarly manage the same

water issues.

COP has an impressive list of policies that all play a role in its vision of sustainability,

and that demonstrate its commitment to being "a model of sustainable practices" (COP, 2020c,

p.11). Further, the city affirms its "responsibility for supporting a stable, diverse, and equitable

economy; protecting the quality of the air, water, land, and other natural resources; conserving

native vegetation, fish, wildlife habitat, and other ecosystems; and minimizing human impacts on

local and worldwide ecosystems" through and obligation to encourage "equity, prosperity,

resilience and health, both in its internal practices and in community-wide initiatives" (COP,

2020c, p.1). Altogether, the city has a total of 81 policies that touch on sustainability, of which

34 are binding city policies, 15 are non-binding city policies, and 32 are administrative rules

adopted by city bureaus pursuant to the rule-making authority (COP, 2020d), as shown in Exhibit

2.2. For this research, the analysis will not discuss the policies that are water-related in detail.

SCC differs from COP and is only responsible for some of the activities that involve water, not

its oversight; however, water-related policies were included in the total count, as they play a

crucial role in COP's environmental wellness and sustainability goals (SCC, 2018b).

Nevertheless, to date, the city categorizes its policies by category, subcategory, and number. The

81 policies mentioned above fall into the following categories: (1) Administrative, (2)

Environment (Built), (3) Environment (Built) and Utilities, (4) Environment (Natural), (5) Parks

and Recreation, (6) Transportation, and (7) Utilities (COP, 2020). Then, each policy is divided into subcategories including: (1) Purchasing, (2) Purchasing and Sustainability, (3) Sustainability, (4) Green Building, (5) Long Range Planning, (6) Climate Change, (7) Fossil Fuels, (8) Natural Resource Protection, and (9) Sewer, Stormwater, and Erosion Control, (10) Solid Waste and Recycling, (11) Urban Forestry, (12) City Vehicles and Equipment, (13) Water Works, (14) Energy, (15) Endangered Species, (16) Watershed, (17) Development Services, Administrative Policies, and Procedures, and (18) Water System Engineering and Development (COP, 2020).

Of particular interest is Policy 1.09 - Sustainable Procurement Policy (SPP) adopted on July 11, 2003, and in the subcategory 'Purchasing and Sustainability' (COP, 2020d). Since its implementation, the success of the city's SPP has garnered attention from external organizations and, more recently, has become a model of excellence (MacInnes, phone call, November 6, 2019). At a high level, the policy outlines purchasing requirements, inclusive of administrative guidelines, for all relevant stakeholders, ranging from elected officials, city planners and design specialists, to internal procurement staff. The policy also calls for collaborative action when "planning and designing projects, developing project and operations budgets, developing asset management plans, writing product and service specifications or standards, selecting materials, making purchasing or supplier decisions, and developing and managing city contracts and price agreements as applicable to their roles and responsibilities or a specific project" (COP, 2018, pg. 1). Furthermore, the policy references the use of a COP contracting manual to assist individuals with best practices in each industry, as shown in Appendix C.

Other findings suggest that the COP SPP is very dissimilar from the SCC EPP. For example, the SPP resulted from a supply chain analysis that Trucost, an outside consultant,

completed that monetized COP goods and services and their adverse effects on the environment and the city's social and economic health (COP, 2016). The city leveraged the findings from this analysis to identify its purchasing goals and targets for the SPP. Additionally, the contracting manuals are updated annually to reflect changes in sustainability (e.g., standards and certifications) and to incorporate progressive ideas in its purchasing practices (COP BRFS, 2020). More impressively, the city successfully established a sustainable procurement program within BRFS that is devoted to overseeing the SPP citywide (COP BRFS, 2020). Altogether, the city is actively demanding "cleaner, greener, fairer, smarter," and safer goods and services. Evidence of this attitude is evidenced in the city's contracting manuals that state, "in every purchase, the city is a force for good" (COP BRFS, 2020, para. 1; MacInnes, phone call, November 6, 2019).

The city has other projects and programs that support its sustainability-related policies in addition to its sustainable procurement program. To date, COP has a total of 17 programs and 10 ongoing projects (COP BPS, 2020a), as shown in Appendix C. Three of the 17 programs, Commercial Building Energy Reporting, Home Energy Score, and Portland Clean Energy Community Benefits Fund (PCEF), are charged with tracking energy consumption and encouraging the use of renewable energy and upgrades in commercial district, residential, and small business buildings through incentives (COP BPS, 2020b). An additional six of the 17 programs provide direct services to city residents (COP BPS, 2020b). Of those six, three are devoted to community education and providing waste management resources to residents to reduce citywide waste, including Master Recycling Program; Event Recycling; and Garbage, Recycling, and Compost (COP BPS, 2020b). The other three programs include Fix-It Fairs, Resourceful PDX, and Sustainability at Work (COP BPS, 2020b). Fix-It Fairs and Resourceful

PDX help residents adopt the three dimensions of sustainability - environment, social, and economic health - in daily activities, such as buying smart and local, repurposing products, conserving resources, and making healthier decisions (COP BPS, 2020b). Additionally, Sustainability at Work is a program that teaches businesses "how to green" and get recognition for their initiative in sustainability, inclusive of certifications (COP BPS, 2020b, para. 16). There are also the Comprehensive Planning and Environmental Planning programs that prepare for employment and population growth, "provide guidance for land use and public facility investment decisions," and ensure that city plans consider watershed and environmental health goals (COP BPS, 2020b, para. 3). Finally, the Smart City PDX and Sustainable City Government programs integrate technology and advocacy strategies to make financially and socially responsible decisions in its efforts to prevent and reduce environmental degradation.

Of the 10 ongoing projects, all directly connect to citywide planning that impacts the needs of current and future generations (COP BPS, 2020c). These projects include the following: Central City 2035, Ezones Map Correction, Fossil Fuel Terminal Zoning Amendments, Montgomery Park to Hollywood Transit and Land Use Development Study, Off-road Cycling Master Plan, Powell-Division Transit and Development Project, River Plan, South Portland Area Planning, South Reach, and West Portland Town Center Plan (COP BPS, 2020c). It is important to note that this research does not consider projects related to housing or historical sights and buildings. Currently, SCC has a planning department that manages zoning, a separate housing authority that manages federal affordable housing programs, and also delegates housing of special populations to the Office of Supportive Housing (OSH). Although social health is considered a dimension of sustainability in both COP and SCC, projects for affordable housing, residential infill, historical landmarks, and residential zoning amendments fell outside of the

scope. These projects were not comparable for the purposes of this research and should be considered in future sustainability studies that include topics such as, cultural awareness, neighborhood crime and violence, housing, and other basic human necessities or social equity indicators (COP BPS, 2020c; SCC, 2019b).

Part IV: Feasibility Analysis

Table 4.1: 5 Top-Spend Commodities in the County of Santa Clara - One-Time Standard Purchase Orders

| | 5 Top-Spend Commodities in the County of Santa Clara | | | |
| | One-Time Standard Purchase Orders | | | |
Commodity Code	Commodity Code Description	Market Industry	Past 5-Year Spend
1	70	Automotive Vehicles and Related Transportation Equipment	Automobiles	$ 18,400,013.36
2	46500; 465; 475	Hospital, Surgical, and Related Medical Accessories/ Sundrie	Health Care Equipment and Supplies	$ 17,412,827.46
3	20400; 204; 206	Computer Hardware and Peripherals for Microcomputers	Technology Hardware, Storage and Peripherals	$ 6,800,059.64
4	42500	Furniture: Office	Household Durables	$ 5,536,869.24
5	20491	Servers, Microcomputer: Application, Database, File, Mail, Network, Web, and Ecetera	Electronic Equipment, Instruments and Components	$ 2,492,907.14

Table 4.2: 5 Top-Spend Commodities in the County of Santa Clara - Contract Release Purchase Orders

| | 5 Top-Spend Commodities in the County of Santa Clara | | | |
| | Contract Release Purchase Orders | | | |
Commodity Code	Commodity Code Description	Market Industry	Past 5-Year Spend
1	45000	Hardware and Related Items	Commerical Services and Supplies	$ 30,428,923.00
2	93146	Furniture, Office, Maintenance and Repair, Including Refinishing and Reupholstering	Household Durables	$ 18,965,809.80
3	76596	Recycled Road And Highway Equipment and Supplies	Construction Materials	$ 10,403,549.95
4	60000	Office Machines, Equipment, and Accessories	Commerical Services and Supplies	$ 9,175,403.00
5	204; 20700	Computer Hardware and Peripherals for Microcomputers	Technology Hardware, Storage and Peripherals	$ 7,323,277.40

Tables 4.1 and 4.2 serve as a preliminary study for introducing sustainability initiatives in SCC. Leveraging the spend analysis conducted for the survey and statistical regression in Part I: Baseline Survey and Non-Experimental Correlational Regression Analysis, the research suggests that SCC should target its five top-spend commodities in one-time SPOs and CRPOs upon introduction of the recommended policy in Part III: Policy Recommendation. Further, it should consider the NIGP and UNSPSC child commodity codes that fall under the NIGP and UNSPSC parent commodity codes in Table 4.1 and 4.2. Moreover, SCC should conduct a thorough assessment of its current long-term contracts in these commodity pools, which includes review of sustainability standards and certifications that meet the objectives of SCC's SMP and ESG

(Wasserlauf, personal communication, March 4, 2020). From there, SCC may find, via its terms and conditions, scopes of work, or additional exhibits, sustainability-related requirements and specifications to incorporate into the policy's administrative guidelines and contracting manuals (Wasserlauf, personal communication, March 4, 2020). Limiting the scope to these high-spend commodity codes and market industries will assist SCC in its implementation of a sustainable procurement policy. Hence, these findings offer a foundation for further discussion as SCC moves from theory into practice.

ANALYSIS AND CONCLUSION

Part I: Baseline Survey and Non-Experimental Correlational Regression Analysis

Limitations

Since the deletion of SCC Board Policy 5.3.17 - EPP, there has been limited movement and executive direction to develop a sustainable purchasing policy for SCC. Further, there are no previous reports that discuss (1) the countywide application of sustainable procurement in SCC, and (2) the correlation between county spend and its transactional vendors' execution of limited or zero supply chain impact, green product lifecycle management, internal corporate responsibility projects or programs, and corporate responsibility strategies in their company. Additionally, previous to this baseline study, SCC has not surveyed nor researched its vendor community to gauge sustainability within industries and in its procurement activities. However, this analysis serves as a baseline for SCC, and interested parties should accept it as such; there is limited research related to SCC's sustainable procurement practices.

There also remains a risk of selection bias and non-response bias in the survey results. As mentioned earlier, in Part I: Baseline Survey and Non-Experimental Correlational Regression Analysis, the survey was administered to the total population of transactional vendors in the ten top-spend market industries for one-time SPOs and CRPOs. As a result, the vendors represented in Table 2.1 were not randomly selected and, thus, their responses may not accurately portray the population's sentiments and most-frequent sustainability practices. Furthermore, only 8% of the target population responded to the survey. That being so, transactional vendors who did not provide feedback may have elected to opt-out due to reasons such as (1) feeling at-risk for losing future contracts or business opportunities due to a lack of sustainability-focused initiatives in their company, (2) timing of the survey (e.g., around the end-of-year, holiday season), and (3)

unavailable information or personnel to help complete the survey. Consequently, in the event of the survey's application to future studies, it is important to carefully consider the inferences made from Table 2.1 as its inherent biases pose a threat to their external validity (Sylvia & Sylvia, 2012).

A supplementary statistical regression was employed to help resolve the negative impact of selection and non-response bias, as well as the use of a non-randomized and small sample size. However, there remains an overarching threat to the baseline analysis' external validity. Instead of survey responses, the data used in the second study to help identify vendors' sustainability initiatives was dependent on publicly available information advertised online via websites, web pages, blogs, and articles. Further, despite the introduction of random sampling, the resulting data and findings only explained 8.6% and 2.2% of the variation between both models, as shown in Table 3.1 and Table 3.2. Throughout the data collection period, there were various observations that illustrated the limitation of this secondary study.

Collectively, small businesses and select industries may have had a profound impact on the final results. For example, often vendors with a small business did not have a public-facing website or had scarce content on their pages. Although there is no direct evidence from the observations, this may be attributed to limited resources (e.g., personnel and money) to host a website, or prioritize and pursue sustainability in their company. On the other hand, vendors that sold goods wholesale rarely had information about their company outside of their catalog. Moreover, generally, vendors who provided technology-related services and developed software did not advertise their sustainability efforts; however, they proudly shared the impact their technology had on their customers' success in sustainability. Alternatively, vendors who supplied specialized goods and medical equipment were more prone to post limited content and

exhibit less initiative in sustainability. In summation, and after revisiting the spend analysis in Part I: Baseline Survey and Non-Experimental Correlational Regression Analysis, SCC spending in healthcare, technology information, and industrials is high, as shown in Table 1.1 and 1.2. Consequently, the randomly selected vendors who fell into these market sectors may have acted as outliers and compromised the external validity of the second study due to a minimal amount of publicly available information. Hence, future applications and discussion of the findings in the baseline analysis require careful consideration.

Analysis

At first glance, the research is teeming with contradictions. The baseline survey suggests most, if not all, vendors are actively pursuing green business practices and sustainability initiatives. Alternatively, there is a tendency for county spending to be higher among vendors who show limited activity, and thus, evidence that they may not be enthusiastic about sustainability. Although these results are puzzling, they also reinforce the fickle nature of sustainability and the duality between the public and private sectors. Perhaps it is the corporations that are burgeoning with innovative ideas, eager to please consumers and drive zero or limited impact supply chains, green products and lifecycles, internal programs and projects, and corporate responsibility strategies. Inversely, it may be SCC leading its constituents, including vendors, into a future of sustainability. Nonetheless, these results reinforce the shared responsibility for consumers and producers to care for SCC's economic health, as well as its social and environmental well-being. Additionally, these results draw special attention to the role of small businesses and the 'Technology, Hardware, and Storage Peripherals' and 'Health Care Equipment and Supplies' market industries in SCC's vision of sustainability.

Anecdotal evidence and observations suggest that, due to the limited availability of resources, small businesses are less inclined to take an interest in green business practices. This attitude is reinforced by outside research which suggests that small business owners have "more pressing issues to deal with [to] stay alive and be profitable" and do not recognize sustainability as a strategy to their success (Nadim & Lussier, 2010, pg. 79). However, despite misconceptions, the role of small businesses in the development of sustainability is quickly expanding as they become crucial to "addressing issues that really matter and make important contributions to making the world a better place" (Nadim & Lussier, 2010, pg. 81). The presence of small businesses in this research demonstrates an opportunity for SCC to extend its reach, past the best price and value contracts, and encourage participation in sustainability. Steps to leverage vendors' existing sustainability initiatives in SCC's purchasing practices will require collaboration from all cohorts in the vendor community, including small businesses.

Specific to SCC is the high spending in the 'Technology, Hardware, and Storage Peripherals' and 'Health Care Equipment and Supplies' market industries. Any initial assumptions that preceded the research and results turned out to be incorrect, as corporations in technology and software did not show sustainability initiatives like their medical supply and service counterparts. However, these results make sense and are likely because society expects its healthcare facilities, providers, and manufacturers to "protect and improve public health" (Buffoli, Capolongo, Bottero, Cavagliato, Speranza, & Volpatti, 2013, pg. 411). The prior mentioned observations match strategies to incorporate policies, consider supply-chain, encourage community volunteering, and reduce the environmental impact of hospital and clinic operations to mitigate adverse effects on the local population (Buffoli et al., 2013). For SCC, this is especially relevant as it owns three public hospitals, and SCC charges PRC with purchasing

oversight of all medical-related goods and services. Similar to small businesses, it may be worthwhile for SCC to pay careful attention to sustainability developments in the 'Health Care Equipment and Supplies' market industry and incorporate rising trends in its sustainability goals.

Alternatively, corporations in the 'Technology, Hardware, and Storage Peripherals' market industry do their part and bring transparency to other private and public entities (Chvatalová, Kocmanová, & Dočekalová, 2011). Rather than pursuing sustainability initiatives internally, technology and software developers sell products that monitor and report on "environmental, economic, social, and corporate governance aspects" relative to "measurement[s] of company performance" (Chvatalová et al., 2011, pg. 235). Initially, their secondhand role in sustainability is a disappointment; however, additional observations and research absolve these sentiments. Most often, these technology-related products measure key performance indicators (KPIs) and provide necessary data for SCC and other agencies to ensure accountability and refine their processes and practices, like those in sustainable procurement. Today, these reports are a popular mainstream activity and continue to support countywide activities (Chvatalová et al., 2011). Nevertheless, all vendors, regardless of market industry and size, should introduce sustainability in their daily business. Furthermore, SCC, as an active partner, should maintain a pulse on the vendor community to anticipate new trends and better facilitate countywide sustainable purchasing practices.

Part II: Gap Analysis

The research demonstrates that COP is leading SCC in sustainability. Fortunately, SCC is moving in the right trajectory, as many of its policies, programs, and projects target similar city objectives. Further, the similarities between these two local governments echo sustainability trends in energy conservation, fossil fuel and waste reduction, and wildlife and ecosystem

preservation. However, where SCC falls behind, are in the areas that have started to gain popularity and attention, including limited or zero impact supply chain, green product or service lifecycle management, internal corporate responsibility programs and projects, and corporate responsibility strategies. SCC deleted many of its adopted policies that considered "green" attributes in its goods (e.g., "degradable" plastic and recycled products) and daily activities (e.g., double-sided copying), as well as its policy dedicated to sustainable purchasing, to the EPP. Granted, the omission of these policies was executed in part due to the feasibility of policy implementation and, arguably, consolidation into other sustainability-related policies. However, their deletion, and the county's decision to not reintroduce or refine these policies, points to a more significant issue linked to its purchasing practices and vision of sustainability: a culture of sustainability is less likely to permeate its organization, communities, and businesses if SCC does not aggressively pursue all possible sustainable policymaking triggering mechanisms (Gerston, 2010). As SCC tackles sustainability, it should consider gaps that COP highlights in its procurement policies and programmatic efforts to support sustainable purchasing and business practices.

First and foremost, SCC no longer has a policy that demands the consideration of sustainability standards, certifications, or evidence of sustainability initiatives when purchasing goods and services. Consequently, SCC PRC and its procurement officers cannot hold countywide agencies and employees accountable, and ensure that its purchasing practices support existing sustainability policies. COP demonstrates this policy gap as they clearly state, "by understanding and taking responsibility for the full, life cycle impacts and costs of goods and services associated with city purchases, the city reduces risk, practices fiscal responsibility, reduces adverse social and environmental impacts, and contributes to sustainable development in

general" (COP, 2018, pg. 1). Hence, without directives to consciously "stimulate the development of sustainable technologies" and business practices, SCC's purchasing practices will fail to change consumer behaviors, internally and externally (Grandia et al., 2015, pg. 1). Like its city counterpart, to strategically promote sustainability in SCC, county stakeholders must recognize the inherent influence its goods and services have on social and human health and the environment and economy to address the current policy gap and act.

Adjunct to COP's sustainable procurement policy is programmatic support. Unsurprisingly, the city's two programs, Sustainable Procurement Program and Sustainability at Work, point to additional gaps in SCC: (1) sustainable procurement management techniques and resources for employees and (2) recognition and green business tips for vendors (COP BPS, 2020b). Regrettably, SCC PRC unsuccessfully formed the "The EPP Team," a team composed of a select few executive leaders, to develop guidelines, target market industries, and contracting manuals (SCC, 2009, pg. 2). Further, it neglected to include discussion of its vendor community and the various market industry cohorts (e.g., vendor pools in healthcare and technology) that would likely require county support to become compliant and competitive. Altogether, SCC was not able to champion a program dedicated to the adoption of sustainable procurement tools, such as administrative guidelines and contracting manuals, standards and certifications, vendor directories, academic resources and reports, and one-on-one guidance. As the research suggests, these gaps are partially attributed to the failure of the EPP and, consequently, stress the importance of embedding policy with implementation strategies (Gerston, 2010).

To summarize, the COP and SCC frequently overlap in their pursuit of sustainability, and equally understand the threat that climate change poses to its communities (Tamir & Huang, 2019). However, where the city's focus spans all facets of sustainability, including purchasing,

the county is delayed in adopting many progressive methods to achieve a sustainable culture. As SCC ventures into the future of sustainability, it will not be enough to reduce reliance on fossil fuels, environmental degradation, and vehicle-related GHG emissions, or to bolster long-term countywide planning with LEED or EnergyStar rated buildings (Tamir & Huang, 2019; SCC FAF, 2018). Nowadays, local and global trade, investments, and goods and services are becoming "important engines of growth, productivity, job creation, development," and sustainability (Tamir & Huang, 2019, para. 17). Reflecting on the research and this new reality, SCC should follow COP's lead and turn its attention back to sustainable procurement to resolve policy and program gaps.

Part III: Policy Recommendation

The research and findings in Part I: Baseline Survey and Non-Experimental Correlational Regression Analysis and Part II: Gap Analysis suggests that SCC PRC, in coordination with the OOS and FAF, would realize the benefits in re-adopting a fiscally responsible countywide sustainable procurement policy that reduces the short and long-term adverse impacts that SCC's goods and services have on the environment, human and social health, and the local economy (COP, 2018; SCC, 2019b). As part of its adoption, SCC must equip the sustainable procurement policy with administrative guidelines and a contracting manual that specifies best practices for sustainable procurement (Wasserlauf, personal communication, November 19, 2019). Further, it must align with SCC's Board Policy 8.0 - Sustainability Policy, SMP, and ESG that seek to accomplish goals, such as reducing the use of energy, fossil fuels, and water, converting waste into energy, planting trees to build an urban forest, interconnecting county, local, and regional trails, and increasing the number of "clean and green" courses and training for its labor force (SCC, 2018b, pg. 33). To help meet these goals, and as part of the guidelines and manual, the

recommended policy can strategically incorporate a variety of "processes, decisions, methodologies, and actions" for SCC's procurement activities (COP, 2018, pg. 2). More specifically, it can direct procurement officers to use "technical and non-technical specifications" that improve the efficiency of a good or service through recovered costs associated with environmental or social degradation (Witjes & Lozano, 2016, pg. 37). Part IV: Feasibility Analysis presents more granular details and first-steps that SCC can take in adopting the recommended policy.

Additionally, while a sustainable procurement policy is a start, as a standalone action it is insufficient. SCC PRC needs to consider (1) procedural justice, as well as (2) countywide commitment to change purchasing practices (Grandia, Steijn, & Kuipers, 2015). Therefore, as noted previously, the recommended policy requires buy-in from OOS and FAF to ensure both positive reception, and stakeholder and executive support (Grandia et al., 2015). However, aside from the verbal endorsement of policymakers, successful adoption and implementation are reliant on change agents (e.g., leadership and employees) within SCC PRC (Grandia, 2015). These change agents play a critical role in increasing countywide readiness and influencing the beliefs, intentions, and behavior of employees who are procuring goods and services for their agencies (Grandia, 2015). Change agents also are responsible for facilitating communication and collaboration with suppliers throughout the procurement process (Witjes & Lozano, 2016). Altogether, through internal and external focus groups, open forums, and additional surveying, SCC can more effectively refine and promote its sustainability agenda (Wasserlauf, personal communication, November 19, 2019). PRC must consider change management strategies and supporting programs in the policymaking process to help SCC cultivate a culture of new and

more sustainable business practices throughout its supply chain (Gerston, 2010; Witjes & Lozano, 2016).

Part IV: Feasibility Analysis

Pivotal to the feasibility of a sustainable procurement policy in SCC is evaluation metrics (Gerston, 2010). A major downfall to SCC's EPP was unclear objectives and measurements to show progress and achievement in meeting purchasing goals. Each goal must have a KPI to measure the impact that SCC's purchasing practices have on the environment, community, and economy, and, to ensure that the policy shows countywide benefit. The incorporation of accountable metrics "gives a clear message" that SCC expects its employees "to deliver on this agenda [item]" (Wasserlauf, personal communication, March 4, 2020; Walker & Philips, 2009, pg. 55). SCC PRC can develop these metrics by leveraging market research, subject matter experts, and institutional knowledge obtained from in-house county employees at OOS and FAF, or from outside consultants. As the above findings suggest, step-by-step, PRC must start by identifying (1) how many of its contracts have sustainability-related terms and conditions, (2) how many of its contracts meet SMP goals, and (3) the monetized impact of the SMP goals met by contractors (Wasserlauf, personal communication, March 4, 2020). Embedding the recommended policy with this information will provide support from a broader audience and for its deployment. Repeating this exercise in the near future will further help PRC determine which of its sustainable purchasing practices are making the most difference and, consequently, which to incorporate into its administrative guideline and contracting manuals.

SCC's organizational structure and its active vendor community add two additional layers to the adoption of a sustainable procurement policy. Currently, its procurement activities are decentralized, meaning that countywide agencies and departments have the delegation from

the Board of Supervisors (BOS) to purchase up to a certain dollar threshold (SCC, 2019a). As a result, PRC's primary role becomes the "gatekeeper," with expert knowledge of procurement policy and processes to ensure countywide compliance. Therefore, to successfully integrate new sustainable purchasing practices countywide, PRC must engage input from all stakeholders, including those outside its organization. Immediate concerns that countywide agencies and departments may address include budget limitations, tight timelines, obstruction or limitation of other county initiatives, conflicting policies or programs, and bandwidth (Wasserlauf, personal communication, November 19, 2019). Alternatively, as PRC decides to implement a sustainable procurement policy and programmatic support, it should carefully consider internally-related subjects, such as communications, SCC's financial and solicitation management systems, supporting technology, workload (e.g., the volume of competitive solicitations, CRPOs, and one-time SPOs), overarching assumptions, and access to granular spend data (Wasserlauf, personal communication, November 19, 2019). Finally, SCC must regularly solicit feedback from vendors to maintain its commitment to fair, open competition, and sound business practices (SCC PRC, 2020). PRC is fundamentally responsible for ensuring "the public receives the best value for tax dollars expended" (SCC PRC, 2020, para. 1). However, it is equally responsible for collecting buy-in from its diverse and well-informed vendor community, comprised of businesses of all sizes and market industries. If SCC chooses to neglect this cohort, it will limit their ability to encourage producer-led responses in supply markets and "public promotion of environmentally, ethically, and socially responsible buying" (Walker & Philips, 2009, pg. 55).

In the end, SCC must compare the status-quo to the financial costs, complexities, and countywide anxieties associated with the introduction of sustainability jargon, language, and expectations into its purchasing practices. Fortunately, there are strategies to combat monetary

burdens and the need to house sustainability experts throughout procurement. For example, SCC can insert a clause in its sustainable procurement policy which states that SCC shall purchase sustainable goods and services "unless they (1) are not available with reasonable competition, (2) are not available within a reasonable time frame, (3) are not cost-effective or (4) do not perform as required for SCC's intended use" (SCC, 2009, pg. 1). SCC can also efficiently study language from other organizations (e.g., the SPP and COP resources and materials) to help "templatize" best practices in sustainability and educate stakeholders (Wasserlauf, personal communication, March 4, 2020). The research suggests that implementation of sustainable procurement presents a challenge, but it also reinforces the systemic nature of sustainability, and the gaps in SCC's ability to empower its organization to purchase responsibly (Walker & Philips, 2009). It is in SCC's interest to generate awareness and action in sustainable procurement as a strategy to influence countywide stakeholders to embrace its sustainability agenda.

Conclusion

Through well-founded research and collaborative policymaking, SCC can re-adopt a sustainable procurement policy, inclusive of best practices, programmatic support, and organizational change, to make considerable progress towards a better future and achieve its vision of sustainability. Simply, the integration of sustainable purchasing practices will transform the way SCC does business. This research serves to start this transformation and push purchasing back to the frontlines of SCC's sustainability agenda. Further, it demonstrates the need for and feasibility of introducing sustainable procurement using insight from SCC's one-time SPO and CRPO spend and vendor community, other external organizations, and the multiple analyses. Unfortunately, there is a tendency to overlook procurement in exchange for more attractive and pressing triggers and agenda items in the policymaking world. Consequently, SCC has failed to

fully promote sustainability initiatives, support sustainability policies, and leverage sustainability practices employed by its vendor community in its purchasing practices. However, as this research suggests, re-introducing sustainable procurement is a viable action and not an impossible feat.

As SCC enters a new decade, sustainable procurement becomes imperative to meeting the needs of current and future generations. Therefore, the next step is to adopt and embrace a purchasing framework to make sustainability actionable for all stakeholders. The goods and services SCC purchases, and which vendors provide, can have a profound impact on society. Additionally, despite the few noted limitations of this study, it remains the central truth that money has the power to influence and create change. Perhaps, SCC can abandon the status-quo and use its purchasing power and regulatory functions to actively embrace the principles of economic prosperity, environmental health, and social equity. After all, there are many ways to pursue sustainability, but there is only one way to shift the supply chain: to become an educated consumer, buy smartly, and think sustainably.

EXHIBITS

Exhibit 1.1: MailChimp Survey Invitation and Anticipated, Frequently-Asked Questions

Warm Regards,

Vendor Outreach Team

Why me? *Your company was identified as having received a contract or purchase order from the County within the past 5 years and your specific contact information is associated with the company's profile on record.*

Can someone else complete the survey? *Yes, this survey may be forwarded to another colleague who might be more suited to respond on behalf of your company.*

What if we don't participate? *Participation in this survey is completely voluntary and all vendors are encouraged to participate.*

Subscribe today to stay up-to-date with County of Santa Clara Procurement Department news, upcoming events, and business opportunities!

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150 West Tasman Drive
San Jose, CA 95134
(408) 491-7400

VendorOutreach@prc.sccgov.org

Exhibit 2.1: Sustainability in the County of Santa Clara

Title	Division	Chapter/ Subdivision	Description
Sustainability in the County of Santa Clara			
County Ordinance Code			
Title A	Division A11	Subdivision A11	General and Administration
		Subdivision A11	County Executive
		Subdivision A11	Occupational Safety and Environmental Compliance
			Sustainability
			Local Agency Formation Commission of Santa Clara County
		Chapter II	Environmental Resources Agency
	Division A33	Chapter V	Department of Planning and Development
		Chapter VI	Department of Agriculture and Resource Management
			Department of Environmental Health
	Division A34	Chapter VI	General Services Agency
			Purchasing
Title B	Division B11		Regulations
	Division B11.5		Environmental Health
			Non-Point Source Pollution
	Division B28	Chapter II	Integrated Pest Management and Pesticide Use
		Chapter III	Pesticide Management
	Division B29		IMP Implementation
	Division B33		Agriculture and Resource Management
			Sustainable Landscape Ordinance
Title C	Division C3		Construction, Development, and Land Use
	Division C12		Buildings
	Division C13		Subdivisions and Land Development
	Division C14		Land Preservation Contracts
	Division C16		Energy Conservation
	Division C20		Tree Preservation and Removal
	Division C21		Habitat Conservation Plan
			Urban Agriculture Incentive Zones

Sustainability in the County of Santa Clara

Policy Type	Category	Policy Number	Description
Board	Facilities	3.14	Policy on Waste Reduction and Recycling (Adopted 5-9-95; Deleted 10-8-13)
	Fiscal and Budget	4.11	Policy for Planning, Reporting, and Financing Capital Projects (Adopted 3-10-98; Amended 2-26-08)
	Land Use	7.0	Policies on Land Use and Environment (Revised 6-08-2018)
		7.1	Tree Preservation Policies
		7.17	Procedures for Consultants to Prepare Environmental Documents for Private Projects in Santa Clara County (Adopted 12-15-15)
	Procurement	3.12	Policy on Purchase of Recycled Products (Adopted 3-16-93; Deleted 10-8-13)
		3.13	Procurement Policy on "Degradable" Plastic Products (Adopted 4-24-90; Deleted 10-8-13)
		7.11	Vehicle Procurement - Low Emission Vehicles (Adopted 2-10-04; Amended 3-27-07)
		7.13	Procurement, Management, and Disposal of Electronic Products (Adopted 2-28-06)
		3.29	Policy Relating to Use of Double-Sided Copying in County Facilites (Adopted 4-6-99; Deleted 10-8-13)
		7.1	Energy Efficiency Standards for New Building Designs, Facility Leases, Equipment, and Exploration of Solar Energy and Other Resources (Adopted 12-10-02)
		7.14	Green Building Policy for County Government Buildings (Adopted 4-25-06; Amended 9-29-09)
	Sustainability	8.0	Policies on Sustainability (Adopted 4-27-10)
		8.1	Sustainability (Adopted 4-27-2010)
		8.2	Zero Waste Events (Adopted 5-24-11)
		8.3	Green Cleaning Policy (Adopted 9-10-13)
		8.4	Zero Waste Policy for County Facilities and Operations (Adopted 10-8-13)
		8.5	Sustainable Landscaping Policy (Adopted 3-22-16)

Sustainability in the County of Santa Clara

County Policies

Policy Type	Category	Policy Number	Description
Administrative	Procurement		Surplus Personal Property Disposal Policy
			Environmentally Preferable Purchasing Policy (Adopted 9-29-09; Deleted 2-28-12)

Sustainability in the County of Santa Clara

County Projects and Programs

Lead	Type	Name
Facilities and Fleet	Project	Civic Center Master Plan
		Electric Vehicle Charging Stations
		Renewables for Revenue Project (R4R)
	Program	Bicycling
		Emergency Ride Home
		Pre-Tax Commuter Benefits
		VTA SmartPass Program
	Project	Driving to Net Zero Project
		Silicon Valley 2.0 Project
Office of Sustainability	Program	BAYREN Energy Incentive Program
		County Climate Coalition
		Environmental Stewardship Goals
		Greenhouse Gas Inventory Management
		Ridesharing
		Silicon Valley Clean Energy
		Sustainability Master Plan
		Sustainable County Working Group
		Sustainable Landscape Management

Exhibit 2.2: Sustainability in the City of Portland

Sustainability in the City of Portland			
Title	**Chapter**	**Subchapter**	**Description**
			City Charter and Code
Title 3			Administration
	Chapter 3.13		Bureau of Environmental Services
	Chapter 3.15		Office of Management and Finance
		Chapter 3.15.070	Bureau of Revenue and Financial Services
	Chapter 3.33		Bureau of Planning and Sustainability
	Chapter 3.107		Water Quality Advisory Committee
	Chapter 3.110		Bureau of Hydroelectric Power
	Chapter 3.116		Waterways Advisory Committee
	Chapter 3.24		Portland Water Bureau
Title 7			Business Licenses
	Chapter 7.07		Portland Clean Energy Community Benefits
Title 10			Erosion and Sediment Control Regulations
	Chapter 10.40		Permits and Plans
Title 11			Trees
	Chapter 11.20		Urban Forestry Program
	Chapter 11.30		Tree Permit Procedures
	Chapter 11.40		Tree Permit Requirements (No Associated Development)
	Chapter 11.45		Programmatic Tree Permits
	Chapter 11.50		Trees in Development
Title 16			Vehicles and Traffic
	Chapter 16.60		Motor Vehicle Fuels
		Chapter 16.60.020	Biofuel Requirements
Title 21			Water
	Chapter 21.32		Water Conservation Measures
	Chapter 21.35		Wellhead Protection
	Chapter 21.36		Bull Run Watershed Protection
Title 33			Planning and Zoning
	Chapter 33.840		Greenway Goal Exception
	Chapter 33.840		Hazardous Substances Review (Deleted)
	Chapter 33.851		South Waterfront Greenway Review
	Chapter 33.853		Tree Review

Sustainability in the City of Portland
City Policies

Policy Type	Category	Subcategory	Policy Number	Description
Binding City Policy	Administrative	Purchasing	1.12	Biofuels Requirements for Petroleum-Based Fuels Sold in Portland and City-Owned Vehicles
		Purchasing and Sustainability	1.09	Sustainable Procurement Policy
			1.16	Sweatshop Free Procurement Policy and Code of Conduct for Apparel Contractors
		Sustainability	1.1	Sustainable Paper Use Policy
	Environment (Built)	Green Building	9.01	Green Building Policy (Adopted 4-29-09)
			9.02	Green Building Policy Update (Superseded) (Adopted 4-27-05; Superseded 4-29-09)
		Long Range Planning	10.01	Planning Bureau Responsibility and Organizational Structure (Adopted 5-12-99)
			10.07	Workplan to Update the City Comprehensive Plan (Adopted 8-6-08)
			10.08	Community Involvement Work Program and Periodic Review Work Program Amendments (Effective 9-10-10; Amended 2-5-16)
			10.14	Community Involvement Program: Early Implementation of the 2035 Comprehensive Plan (Effective 1-20-17)
	Environment (Natural)	Climate Change	5.01	Local Action Plan on Global Warming (Adopted 4-25-01)
			5.02	Implementation of Policies and Programs to Reduce Local Emissions of Greenhouse Gases (Adopted 10-28-09)
			5.03	City of Portland and Multnomah County 2015 Climate Action Plan (Adopted 6-24-15)
			5.04	Implementation by City Bureaus of Policies and Programs to Keep Portland on a Path to Reduce Local Carbon Emissions 80 Percent from 1990 Levels by 2050 (Adopted 6-24-15)

Sustainability in the City of Portland

City Policies

Policy Type	Category	Subcategory	Policy Number	Description
Binding City Policy	Environment (Natural)	Climate Change	5.06	Portland 2017 Electric Vehicle Strategy (Adopted 10-14-16)
			5.08	Establish Goal to Meet 100% of Community-Wide Energy Needs with Renewable Energy by 2050 (Adopted 6-1-17)
		Fossil Fuels	10.01	Oil Trains (Adopted 11-4-15)
			10.02	Fossil Fuel Infrastructure (Adopted 11-12-15)
		Natural Resource Protection	7.03	Stormwater Management Using Onsite Surface Vegetated Facilities (Adopted 3-19-08)
		Sewer, Stormwater, and Erosion Control	4.03	Sanitary Discharge and Pretreatment Program Administrative Rules (Adopted 9-29-04; Amended 7-17-19)
			4.19	Green Streets Policy and Green Streets Cross-Bureau Phase 2 Report (Adopted 4-18-07)
			4.21	Downspout Disconnection Program (Effective 2-6-09; Amended 7-17-19)
			4.23	Treebate Program (Effective 11-4-09; Amended 7-17-19)
		Sustainability	3.01	Sustainable City Principles (Replaced)
			3.02	Sustainable City Government Partnership
			3.03	2015 Sustainable City Government Principles and 2030 Environmental Performance Objectives
		Solid Waste and Recycling	2.05	Containers in the Right-of-Way - Report (Adopted 10-10-07)
		Watershed	8.01	Actions for Watershed Health, 2005 Portland Watershed Management Plan (Adopted 3-6-06)
	Parks and Recreation	Urban Forestry	2.03	Tree Review, Tree Inspections, Tree Permits, and Tree Related Enforcement Fee Schedule (Effective 1-1-15; Amended 6-28-19)
	Transportation	City Vehicles and Equipment	11.01	Idle Reduction Policy for All City Vehicles and Equipment (Effective 6-24-09)

Sustainability in the City of Portland

City Policies

Policy Type	Category	Subcategory	Policy Number	Description
Binding City Policy	Utilities	Water Works	2.02	Source Water Protection Policy Statement (Adopted 4-401)
			2.03	Columbia South Shore Well Field Wellhead Protection Program (Adopted 7-2-03)
			2.07	Bull Run Water Supply Habitat Conservation Plan (Effective 10-31-08)
			2.08	Agreement with Mt. Tabor Neighborhood Association for Mt. Tabor Park Reservoirs (Adopted 7-15-15)
Non-Binding City Policy	Environment (Built)	Long Range Planning	10.03	Willamette Greenway Plan Update (Adopted 11-25-98)
			10.04	River Renaissance Vision (Adopted 3-21-01)
			10.05	River Renaissance Strategy (12-8-04)
			10.09	Portland Plan (Adopted 4-25-12)
			10.1	Central City 2035 Concept Plan (10-24-12)
			10.11	New Supporting Documents for an Update of Portland's Comprehensive Plan (Effective 11-2-12)
			10.13	Residential Infill Project: Final Concept Report to City Council (Adopted 12-7-16)
		Energy	6.01	Energy Policy
		Endangered Species	4.01	Lower Columbia Steelhead Recovery Plan (adopted 7-29-98)
			4.02	Portland Recovery Plan for Salmon and Trout (Adopted 7-14-00)
	Environment (Natural)	Solid Waste and Recycling	2.03	Beyond 60%: Program Strategies for Achieving the 2005 Solid Waste Recycling Goal (Adopted 3-13-02)
			2.04	Solid Waste Management (Adopted 6-28-06)
		Watershed	8.02	Actions for Watershed Health, 2005 Portland Watershed Management Plan Implementation (Adopted 3-6-06)

Sustainability in the City of Portland

City Policies

Policy Type	Category	Subcategory	Policy Number	Description
Non-Binding City Policy	Parks and Recreation	Urban Forestry	2.01	Urban Forestry Management Plan (Adopted 12-10-03)
	Utilities	Water Works	2.01	Water Efficient Plumbing Standards (Adopted 7-28-99)
Administrative Rule Adpoted by Bureau Pursuant to Rule-Making Authority	Environment (Built)	Development Services Administrative Policies and Procedures	13.21	Recurring Environmental Violation Enforcement Process and Fines (Filed for Inclusion 12-7-05)
			2.07	Memorandum of Understanding Between the Bureau of Planning and the Bureau of Development Services (Filed for Inclusion 9-29-04; Amended 11-19-07)
		Regulatory Improvement	2.08	Agreement for Development Services Functions Between the Bureau of Development Services and the Bureau of Environmental Services (Filed for Inclusion 9-29-04)
			2.12	Agreement for Development Services Functions Between the Bureau of Development Services and the Bureau of Water Works (Filed for Inclusion 9-24-04)
			4.01	Stormwater Management Manuel (Effective 7-1-99; Revised 7-17-19)
		Sewer, Stormwater, and Erosion Control	4.1	Erosion and Sediment Control Manuel (Effective 3-1-00; Revised 4-21-08)
			4.13	Administrative Rules for Discharges to the City Storm Sewer and Drainage System (Adopted 9-20-13; Amended 7-17-19)
			4.15	BES Enforcement Program Administrative Rules (Adopted 3-15-07; Amended 7-17-19)

Sustainability in the City of Portland

City Policies

Policy Type	Category	Subcategory	Policy Number	Description
Administrative Rule Adopted by Bureau Pursuant to Rule-Making Authority	Environment (Built)	Sewer, Stormwater, and Erosion Control	4.16	BES Clean River Rewards Stormwater Discount Program Administrative Rules (Adopted 10-30-06; Amended 7-17-19)
			4.18	Mandatory Sewer Connection Program (Adopted 11-15-06; Amended 7-17-19)
			4.22	BES Public Works Enforcement Program Administrative Rules
			4.27	Nonconforming Sewer Conversion Program (Adopted 12-3-12; Amended 7-17-19)
			4.3	BES Title 10 Discharge Enforcement Administrative Rules (9-20-13; Amended 7-17-19)
			4.31	Maintenance Inspection Program Administrative Rules (Adopted 9-30-13; Amended 7-17-19)
			4.33	Administrative Rules for Use of CIPP Lining in Privately Maintained Pipe in the Public Right of Way (Adopted 6-27-17; Amended 7-17-19)
			4.34	Source Control Manual (Adopted 8-4-16; Amended 7-17-19)
	Environment (Built) and Utilities	Water System Engineering and Development	4.02	Water Bureau's Developer's Manual (Filed for Inclusion 11-30-04)
	Environment (Natural)	Climate Change	5.05	Commerical Building Energy Performance Reporting (Adopted 10-8-15; Amended 2-22-18)
			5.07	Residential Energy Performance Rating and Disclosure (Adopted 6-8-17; Amended 10-18-18)
			5.09	Green Building Certifications List for Low-Carbon Buildings (Adopted 7-5-19)
			5.1	Energy Efficient Building Requirements for Planned Development Bonuses (Adopted 12-14-18)

Sustainability in the City of Portland

City Policies

Policy Type	Category	Subcategory	Policy Number	Description
Administrative Rule Adopted by Bureau Pursuant to Rule-Making Authority		Confidentiality	9.01	Confidentiality of Complainants, Bureau of Planning and Sustainability (Effective 7-21-12)
		Energy	6.02	Renewable Fuel Standard (Biofuels)
		Long Range Planning	10.16	Determination of Rough Proportionality for Major Public Trail Requirements (Adopted 7-10-18)
	Environment (Natural)	Natural Resource Protection	7.01	Portland Plant List (Filed for Inclusion 7-6-04; Amended 7-22-16)
			7.02	Bird-Safe Window List (Adopted 7-5-18)
			7.04	Nuisance Plants Required Removal Program (Adopted 3-15-10 and 4-14-10)
		Solid Waste and Recycling	2.01	Commercial Solid Waste, Recycling and Composting (Effective 1-15-05; Amended 7-15-19)
			2.02	Residential Solid Waste, Recycling, and Composting (Effective 1-17-05; Amended 7-15-19)
			2.06	Business Solid Waste, Recycling, and Composting (Effective 11-19-09; Amended 7-15-19)
	Parks and Recreation	Urban Forestry	2.04	Replanting Requirements for Tree Removal on Private Property, City-Owned and Managed Sites, and Public Rights-of-Way (Adopted 4-7-15; Amended 10-19-15)
	Utilities	Water Works	2.04	Columbia South Shore Well Field Wellhead Protection Area Reference Manual (Effective 7-1-03; Revised 3-14-17)

Sustainability in the City of Portland

City Projects and Programs

Lead	Type	Name
Bureau of Planning and Sustainability	Program	Climate Action
		Commercial Building Energy Reporting
		Comprehensive Planning
		Deconstruction Program
		Environmental Planning

Sustainability in the City of Portland		
City Projects and Programs		
Lead	Type	Name
Bureau of Planning and Sustainability	Program	Event Recycling
		Fix-It Fairs
		Garbage, Recycling, and Compost
		Home Energy Score
		Master Recycler Program
		Portland Clean Energy Community Benefits Fund (PCEF)
		Resourceful PDX
		Smart City PDX
		Sustainability at Work
		Sustainable City Government
	Project	Ezones Map Correction
		Fossil Fuel Terminal Zoning Amendments
		Montgomery Park to Hollywood Transit and Land Use Development Study
		Off-road Cycling Master Plan
		Powell-Division Transit and Development Project
		River Plan
		South Portland Area Planning
		South Reach
		The Green Loop
		West Portland Town Center Plan
Bureau of Revenue and Financial Services	Program	Sustainable Procurement Program

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SurveyMonkey Survey

1. Contact Information

    (1) Representative Name

    _____

    (2) Job Description/ Role

    _____

    (3) Company Name

    _____

    (4) Email Address

    _____

    (5) Phone Number

    _____

2. Which of the following sustainability initiatives does your company **currently employ and/or pursue**?

    Please select all that apply.

    ☐ Limited or zero supply chain impacts (e.g., environmentally friendly choices in supply-chain to avoid toxic waste, water pollution, loss of biodiversity, deforestation, long-term damage to ecosystems, greenhouse gas (GHG) emissions, etc.)

    ☐ Green product and/or service lifecycle management (PM) (e.g., end-to-end management of raw material supply, manufacturing, packaging, distribution and storage, consumption, and end-of-life)

    ☐ Internal corporate sustainability programs and/or projects (e.g., recycling and zero waste, composting, ride sharing and alternative commuting incentives, energy efficiency, double sided printing, etc.)

    ☐ Corporate responsibility strategies (e.g., volunteering, activism, charitable contributions, consumer and employee incentives, etc.)

    ☐ None

    ☐ Other (please specify)

    _____

3. Which of the following sustainability initiatives does your company **plan to employ and/or pursue**?

    Please select all that apply.

☐ Limited or zero supply chain impacts (e.g., environmentally friendly choices in supply-chain to avoid toxic waste, water pollution, loss of biodiversity, deforestation, long-term damage to ecosystems, greenhouse gas (GHG) emissions, etc.)

☐ Green product and/or service lifecycle management (PM) (e.g., end-to-end management of raw material supply, manufacturing, packaging, distribution and storage, consumption, and end-of-life)

☐ Internal corporate sustainability programs and/or projects (e.g., recycling and zero waste, composting, ride sharing and alternative commuting incentives, energy efficiency, double sided printing, etc.)

☐ Corporate responsibility strategies (e.g., volunteering, activism, charitable contributions, consumer and employee incentives, etc.)

☐ None

☐ Other (please specify)

_____

4. Describe the goods and/or services your company provides.

_____

5. Select your company's industry from the list below:

Please select all that apply.

☐ Diversified Telecommunication Services

☐ Interactive Media & Services

☐ Automobiles

☐ Household Durables

☐ Food & Staples Retailing

☐ Health Care Equipment & Supplies

☐ Construction & Engineering

☐ Professional Services

☐ Electronic Equipment, Instruments, & Components

☐ IT Services

☐ Software

☐ Technology Hardware, Storage, & Peripherals

☐ Construction Materials

☐ Gas Utilities

☐ Other (please specify)

_____

6. What type of information does your company want to receive from the County of Santa Clara Procurement Department?

_____

7. How would your company like to receive information, such as: policy updates, business opportunities, upcoming events, and other County news?

    Please select all that apply.

    ☐ Procurement website

    ☐ Social media (e.g., Twitter, Facebook, LinkedIn, Nextdoor, YouTube, etc.)

    ☐ Email mailers

    ☐ Online webinars

    ☐ Live in-person events

    ☐ Other (please specify)

    _____

APPENDIX B

County of Santa Clara Environmentally Preferable Purchasing Policy

1.0 Purpose

The County of Santa Clara (the "County") recognizes that the products and services it purchases have human health, environmental, economic and social impacts and it is committed to sustainability through purchasing products and services that will enable it to meet its current needs without compromising the ability of future generations to meet their own needs.

2.0 Goals

The County desires to purchase products and services that:

- Have a lesser or reduced effect on human health and the environment when compared to competing products and services that serve the same purpose;
- Reduce the County's consumption of resources;
- Conserve water and other natural resources;
- Preserve biodiversity;
- Minimize the release of greenhouse gases into the environment;
- Improve indoor and outdoor air quality;
- Promote zero waste;
- Advance extended producer responsibility by purchasing from suppliers who offer "take-back" services for their products and packaging at the end of their useful life;
- Minimize exposure to toxic chemicals that pose risks to human health;
- Reduce the impact of packaging and transportation;
- Maximize energy efficiency and the use of renewable energy;
- Meet or exceed sustainability standards established by federal, state and local governments and independent third party organizations;
- Are remanufactured, are refurbished and/or contain recycled content, particularly post-consumer material; and
- Are offered by suppliers who demonstrate in their business practices a commitment to the goals set forth in this policy.

Products and services that meet the goals set forth above are referred to herein as "Environmentally Preferable Products and Services."

3.0 Policy

The County shall purchase Environmentally Preferable Products and Services, unless they (1) are not available with reasonable competition, (2) are not available within a reasonable time frame, (3) are not cost-effective or (4) do not perform as required for the County's intended use.

All County departments and employees shall comply with the terms of this policy and shall use their best efforts to achieve the goals set forth herein.

Nothing in this policy shall be construed as requiring any department or employee to terminate an

existing contract to comply with this policy.

4.0 Implementation

The County shall establish a team to assist with the implementation of this policy (the "EPP Team"). The EPP Team shall be comprised the Director of Procurement, the Director of the Department of Agriculture and Environmental Management, the Director of the Department of Facilities and Fleet Services, the Chief Executive Officer of the Santa Clara Valley Health and Hospital System and County Counsel, or their respective designees. The County Executive may require the participation of additional departments, in its discretion. The directors or designees, as applicable, shall actively participate as part of the EPP Team to ensure that the County complies with this policy.

(A) The EPP Team shall:

    (1) Formulate a plan to implement this policy;
    (2) Identify Environmentally Preferable Products and Services;
    (3) Develop product-related administrative guidelines;
    (4) Consult with County departments concerning opportunities to purchase Environmentally Preferable Products and Services; and
    (5) Prepare and submit to the Board of Supervisors an annual report summarizing the implementation of this policy during the previous year; policy related goals for the following year; and recommended changes, if any, to the policy or its implementation.

(B) The Director of Procurement shall:

    (1) Collaborate with County departments in the development and evaluation of technical and performance specifications of Environmentally Preferable Products and Services;
    (2) Include Environmentally Preferable Products and Services specification in County solicitations and evaluation criteria, unless they (1) are not available with reasonable competition, (2) are not available within a reasonable time frame, (3) are not cost- effective or (4) do not perform as required for the County's intended use;
    (3) Develop and implement a strategy to educate suppliers about the policy; and
    (4) Communicate to suppliers the requirements set forth in this policy with respect to all Environmentally Preferable Products and Services supplied in connection with the performance of any contractual obligations with the County.

(C) County Departments shall:

    (1) Include Environmentally Preferable Products and Services specifications in County solicitations and evaluation criteria, unless they (1) are not available with reasonable competition, (2) are not available within a reasonable time frame, (3) are not cost-effective or (4) do not perform as required for the County's intended use;
    (2) Comply with the product related administrative guidelines developed by the EPP Team;
    (3) Comply with this policy with respect to all products and services purchased, irrespective of the method of acquisition;
    (4) Collaborate with the Director of Procurement to fulfill the purpose of this policy;
    (5) Identify one or more liaisons to support the EPP Team to fulfill the purpose of this

policy;

(6) Facilitate departmental use of Environmentally Preferable Products and Services through internal training, information dissemination, development of internal procedures, and other means;

(7) Require liaisons and/or appropriate staff to attend and participate in product-specific end user group meetings and environmentally preferable purchasing trainings;

(8) Participate in the identification, selection and pilot testing, if necessary, of Environmentally Preferable Products and Services; and

(9) Provide feedback to the EPP Team regarding technical and performance specifications, availability and cost of Environmentally Preferable Products and Services.

County of Santa Clara. (2009). Environmentally preferable purchasing policy (Board Policy

5.3.17). Santa Clara, CA: County of Santa Clara.

City of Portland Sustainable Procurement Policy

1. Purpose

In accordance with the City of Portland Sustainable City Principles [1994, 2015] the City of Portland [the City] recognizes that:

1. the products and services the City purchases have inherent social, human health, environmental, and economic impacts;
2. the human health, environmental, social, and economic impacts of products and services occur throughout their life cycle and throughout the associated supply chains;
3. the City can leverage its purchasing to reduce adverse impacts throughout product or service life cycles and influence positive change within markets and communities; and
4. by understanding and taking responsibility for the full, life cycle impacts and costs of goods and services associated with City purchases, the City reduces risk, practices fiscal responsibility, reduces adverse social and environmental impacts, and contributes to sustainable development in general.

As such, the City is committed to understanding and taking appropriate responsibility for the impacts of its purchasing by:

1. establishing this Sustainable Procurement Policy to guide purchasing decisions at the City;
2. integrating sustainable procurement best practices established by this Sustainable Procurement Policy and subsequent sustainable procurement resources into the City's procurement processes and decision making; and
3. maintaining a Sustainable Procurement Program adequate to support City purchasing decisions and to facilitate stakeholder collaboration, compliance, and continuous improvement.

2. Applicability

This policy applies to all types of City-funded procurements and to all City divisions and employees. Specific employee roles, responsibilities, and expectations are further described within this policy.

3. Policy Statement

All City employees shall utilize the City's sustainable procurement guiding principles and follow sustainable procurement best practices when planning and designing projects, developing project and operations budgets, developing asset management plans, writing product and service specifications or standards, selecting materials, making purchasing or supplier decisions, and developing and managing City contracts and price agreements as applicable to their roles and responsibilities and/or to a specific project. In doing so, City employees shall strive to be leaders in sustainable procurement and reduce adverse social, human health, and environmental impacts associated with City purchases while maintaining fiscal health, both in the short and long-term.

4. Sustainable Procurement Guiding Principles

1. Everything is Connected. All life depends on healthy natural systems. Humanity depends on vibrant and fair social systems. Our purchasing decisions impact these systems on all levels.
2. Conserve. Reuse first. Buy only what we need second. Acknowledge real limits of natural resources.
3. Think in 3D. Consider all 3 dimensions—environmental, social, economic—when evaluating options. Look for hidden costs to people and planet not included in price.

4. <u>Take a Life Cycle Perspective</u>. All purchases have impacts over the life of the product or service. Think about long-term costs to people, planet, and the City.
5. <u>Provide Fair Opportunities</u>. Ensure suppliers have a full and fair chance to compete. Promote transparency in decision making and actively mitigate bias.
6. <u>Ensure Health and Safety</u>. Take precautions. Avoid toxins that recirculate in air, water, soils and materials to harm people and animals.
7. <u>Uphold Accountability</u>. Reinforce responsibility and ethical behavior throughout our supply chain, upstream and downstream.
8. <u>Support Innovation</u>. Increase demand and build market capacity for sustainable solutions. Change the status quo for the better.
9. <u>Full Integration</u>. Utilize 3D thinking in all planning, purchasing, and contract management practices. Respect interests of all stakeholders.
10. <u>Lead the Way</u>. Seek continuous improvement and collaborate with other agencies to make a positive difference. Together, many small actions add up to big change.

5. Sustainable Procurement Prioritization

Based on sustainability-related spend analyses and City sustainability policy synergies, the City shall target sustainable procurement practices that:
1. Reduce greenhouse gases (GHGs);
2. Prevent or otherwise reduce exposures to Substances of (Very) High Concern (SVHCs, SHCs);
3. Foster and integrate supplier diversity; and/or
4. Support safe and fair labor practices and ethical behavior throughout the supply chain.

The Sustainable Procurement Program shall develop a sustainable procurement prioritization toolkit or similar guidance for City employees to help maximize fiscally responsible "high value, high impact" actions based on the above targeted impact areas and operational contexts.

This section may be updated in between policy revisions per the continuous maintenance process.

6. Sustainable Procurement Best Practices

The following sustainable procurement baseline and emerging best practices are procurement practices derived from historical City sustainability policies and/or reputable sustainable procurement research and guidance. These best practices may be updated in between policy revisions per the continuous maintenance process. Implementation tools and specific guidance for these best practices shall be provided through the Sustainable Procurement Program.

Baseline Best Practices

Baseline best practices represent sustainable procurement processes, decisions, methodologies, or actions that should be incorporated into City purchasing activities by default ("how we do business").

Greenhouse Gases (GHG) Emissions Reduction
1. Invest in energy efficient products, services and technologies that result in simple paybacks of ten years or less.
2. Specify and buy recycled content products with as high post-consumer waste content as possible while meeting responsible performance specifications; including packaging and shipping materials. Key materials to target for recycled content include paper, plastics, metals, asphalt, and concrete.
3. Specify and buy paper products that meet the City's Environmentally Responsible Paper Standard.

4. Invest in highly fuel-efficient and low carbon fueled fleet vehicles and equipment, following an "electric first" strategy. Include installation of electric charging stations where appropriate. Bureaus are responsible for metering electricity fuel use for tracking purposes.
5. Specify and buy reusable, refillable, and readily recyclable products, including packaging and shipping materials. Invest in processes, technologies, products, or services that reduce waste.
6. Invest in on-site renewable energy technologies at applicable City-owned facilities as defined by the City's Green Building Policy.
7. Purchase renewable energy for City electricity use.
8. Ensure architectural, engineering, and related design services deliverables incorporate City green building and green infrastructure policies and practices.
9. Invest in processes, technologies, products, or services that reduce consumption of natural resources or chemicals.
10. Avoid the use of aerosol cleaning products and canned air products.
11. Avoid the use of bottled water; support access to bottle-fill tap water stations.

Harmful Chemicals Reduction
1. Seek out and utilize processes, technologies, services and products that reduce exposure of Substances of (Very) High Concern (SVHCs/SHCs) to people and the environment. Follow the Precautionary Principle when evaluating the comparative toxicity of processes, products, or services.
2. Specify and utilize interior finishes (paints, flooring, furniture, etc.) that meet third-party leadership standards for less-toxic and low-emitting products.
3. Specify and utilize interior cleaning and maintenance products that meet third-party leadership standards for less-toxic and low-emitting products, including products used by contractors who clean and maintain City facilities. Specify and utilize least-toxic disinfectants and use disinfectants judiciously.
4. Specify and utilize electronics products that meet third-party leadership standards that include mandates for reducing/eliminating SVHCs/SHCs. Specify and utilize electronic recyclers that meet third-party leadership standards for responsible electronics recycling.
5. Use effective and progressive integrated pest management strategies to minimize reliance on pesticides of concern and to ensure careful screening of products, their use, and potential impacts.
6. Do not use exterior materials containing zinc, copper, arsenic, or other materials that can contaminate stormwater and are toxic to aquatic life.
7. Utilize vegetable-based oil, food-grade oil or other environmentally comparable vehicle/equipment oil products, where available, and biodegradable hydraulic fluids.

Supplier Diversity and Fair and Safe Supply Chains
1. Seek out and utilize State certified DMWESB and SDVB contractors.
2. Purchase apparel products from manufacturers that comply with the City's Code of Conduct for Apparel Manufacturers and disclose the apparel product's point-of-assembly factory locations.

Sustainable Procurement Tools/Multi-Purpose
1. Specify and select products and services independently certified to reputable third-party environmental and/or social product and/or service leadership standards, preferably multi-attribute standards that evaluate products or services along their entire life cycle.
2. Whenever possible, utilize life cycle costing methods to determine the full cost of a product, service or design.

3. Utilize strategic procurement methodologies to obtain the best value while advancing sustainable procurement. Applicable strategic procurement methodologies include, but are not limited to: spend consolidation (focusing solicitations only on sustainable procurement products/services); aggregation (leveraging collective purchasing power); standardization (reducing product variety); servicizing; or negotiating for innovation (supplier engagement).

Emerging Best Practices

Emerging best practices represent practices that are desirable for the City to engage in and develop, but due to nascent data, technologies, standards, or processes require pilot testing and/or a longer timeframe for widespread implementation.

GHG Emissions Reduction
1. Request life cycle product environmental impact data through Environmental Product Declarations (EPDs). Use EPD data among like products to identify and select options with lower life cycle impacts. Key materials to target for product-specific EPDs include concrete and other GHG or water intensive products.
2. Specify and utilize sustainably sourced wood for City-owned building and landscape projects, beginning with a pilot project approach.
3. Specify low-carbon professional and technology services.
4. Specify fuel-efficient and low-carbon transportation, distribution and delivery services.
5. Foster circular economy models for products by supporting manufacturer take-back, leasing, and similar practices.

Harmful Chemicals Reduction
1. Request product ingredient and hazard screening assessment disclosure from manufacturers. Use screenings to identify and select products and substances that do not contain or generate SVHCs/SHCs, asthmagens, or respiratory irritants throughout their life cycle.
2. Ensure architectural, engineering, and related design services incorporate material screening and selection requirements that reduce the use of products/materials containing/generating SVHCs/SHCs, asthmagens, or respiratory irritants throughout their lifecycle.
3. When utilizing plastic-containing products, seek plastics that involve the fewest SVHCs/SHCs during the manufacturing process and within the final product.

Supplier Diversity and Fair and Safe Supply Chains
1. Request conflict minerals reporting from applicable electronics manufacturers detailing their due diligence activities to source conflict-free 3TG following the Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. Utilize due diligence information to support the development and purchase of conflict-free products.
2. Evaluate and engage contractors on their company and supply chain sustainability practices and performance based on international conventions/declarations and industry best practices, including labor, governance and ethics. Seek continuous improvement.
3. Evaluate expanding the responsible offeror criteria to include requirements that demonstrate vendor integrity related to environmental, health and safety, labor, governance and ethical business practices.

7. Roles and Responsibilities

Policy outcomes depend upon collaborative action. City employees determine sustainable procurement success as they carry out their roles at the City. The following outlines expectations and how different roles contribute to sustainable procurement at the City.

All City Employees
Within your scope of work:
- When analyzing the need for specific goods or services, consider what alternative options might exist to deliver the same outcome in a better way, utilizing the sustainable procurement guiding principles and related tools.
- Select goods and services following sustainable procurement best practices and resources.
- Reference and utilize Sustainable Procurement Program tools and resources.
- Contribute to sustainable procurement targeted data collection and reporting, as requested.
- Seek opportunities for sustainable procurement training.

Elected Officials and City Budget Director
- Incorporate sustainability assessments into the budget review process to support and advance Sustainable City Principles, City Environmental Performance Objectives, Sustainable Procurement, and related core sustainability policies.

Chief Procurement Officer
- Maintain a Sustainable Procurement Program with dedicated staff and resources.
- Ensure Sustainable Procurement Program viability through adequate staffing, funding, and resource allocation to fulfill the Sustainable Procurement Policy, program expectations, and continuous improvement.
- Seek opportunities for sustainable procurement to align with and complement other City programs and initiatives.
- Seek opportunities to foster and support inter-bureau collaboration that facilitates sustainable procurement practices.
- Advocate for and integrate sustainable procurement guiding principles, best practices and policy mandates in City procurement processes and initiatives.
- Include sustainable procurement and related sustainability policies in employee trainings; support employee continuing education related to sustainability.
- Integrate sustainability into Procurement teams' objectives and job descriptions.
- Support the sustainable procurement community of practice through professional associations and networking.

Sustainable Procurement Program Staff
- Provide sustainable procurement subject matter expertise to City employees.
- Conduct sustainable procurement related research and maintain knowledge of current best practices.
- Develop and maintain sustainable procurement processes, tools and resources for City employees and applicable external stakeholders.
- Collaborate with internal stakeholders to ensure key price agreements and contracts incorporate sustainable procurement best practices and City sustainability policy mandates.
- Develop and maintain sustainable procurement communications with internal and external stakeholders.

- Provide sustainable procurement education and training for City employees and applicable external stakeholders.
- Facilitate strategic sustainable procurement pilot tests and implementation initiatives.
- Facilitate sustainable procurement collaboration among City bureaus.
- Participate in Citywide sustainability committees and/or initiatives aligned with the Sustainable Procurement Program.
- Report on Sustainable Procurement Program activities and performance.
- Oversee sustainable procurement contractor compliance, as applicable and within Program capabilities.
- Develop and maintain Sustainable Procurement Program administrative resources.
- Contribute to the regional, national, and international sustainable procurement community of practice.

Bureau Directors
- Support utilization of the sustainable procurement guiding principles during project planning, contract/purchase decisions, and standards/specifications development.
- Include sustainable procurement best practices and policy mandates in project, program, and operations expectations.
- Integrate sustainability into bureau teams' objectives and job descriptions.
- Ensure project, program, and operations budgets enable City sustainable procurement best practices and policy mandates.
- Support and encourage employee initiatives related to sustainability and innovation.
- Support sustainable procurement targeted data collection and reporting.
- Support inter-bureau collaboration and coordination that facilitates sustainable procurement and related process efficiencies.
- Include sustainable procurement and related sustainability policies in employee trainings; support employee continuing education related to sustainability.
- Support staff time contributing to sustainable procurement initiatives and pilot projects.

Procurement Services and Bureau Procurement Staff
- Review solicitations and procurements for sustainable procurement best practices.
- Initiate conversations and work with Bureau staff to incorporate sustainable procurement best practices and related City sustainability mandates into solicitations, contracts, and price agreements.
- Collaborate with Sustainable Procurement Program staff, including coordinating education of bureau contacts and contractors on sustainable procurement practices and assisting with data collection, compliance and monitoring.
- Reference and utilize Sustainable Procurement Program tools and resources.
- Seek opportunities for sustainable procurement training.
- Support the sustainable procurement community of practice through professional associations and networking.

City Planners, Policy, Program and Operations Managers
Within your scope of work:
- Utilize the sustainable procurement guiding principles and best practices during planning, policy, standards, and process development.

- Seek opportunities for, and implement, inter-bureau collaboration that advances City sustainability and sustainable procurement principles.
- As opportunities arise, update and realign policies, processes, or practices to advance City sustainability and sustainable procurement principles.
- Plan and advocate for budgets that support City sustainable procurement best practices and policy mandates.
- Include sustainable procurement and related sustainability policies in employee trainings; support employee continuing education related to sustainability.
- Support/Facilitate contractor sustainability education and practices.
- Support staff time contributing to sustainable procurement initiatives and pilot projects.

City Project Managers and Design Professionals (e.g. Architects, Engineers, Landscape Architects)
Within your scope of work:
- Utilize the sustainable procurement guiding principles and best practices during project planning and development and when revising standard drawings, details and specifications.
- When analyzing the need for specific goods or services, consider what alternative options might exist to deliver the same outcome in a better way, utilizing the sustainable procurement guiding principles and related tools.
- Incorporate sustainable procurement best practices and prioritization strategies into project design, contractor selection, and material/product specifications and selection.
- Reference and utilize Sustainable Procurement Program tools and resources.
- Plan and advocate for project budgets that support City sustainable procurement best practices and related sustainability mandates.
- Engage project contractors, consultants, suppliers, volunteers, or other City staff on sustainable procurement guiding principles and best practices.
- Contribute to sustainable procurement targeted data collection and reporting, as requested.
- Seek opportunities for sustainable procurement and profession-specific sustainability training.

9. Policy Compliance

City employees are responsible for complying with this policy, utilizing applicable Sustainable Procurement Program tools and resources, and providing targeted sustainable procurement data as requested.

As outlined in the Sustainable Procurement Metrics and Reporting section, the Sustainable Procurement Program shall track Key Performance Indicator (KPI) data at the bureau level to the extent possible to facilitate feedback to bureaus on sustainable procurement performance. The Sustainable Procurement Program shall also develop other feedback loops for bureaus to convey effectiveness of sustainable procurement specifications, processes, and program resources.

The Sustainable Procurement Program shall seek opportunities to incentivize compliance with this policy through recognition, process improvements, or other strategic methods.

10. Sustainable Procurement Metrics and Reporting

The following metrics and reporting requirements shall encourage continuous improvement and may be updated in between policy revisions per the continuous maintenance process.

For each of the targeted impact areas, the Sustainable Procurement Program shall develop at least one Key Performance Indicator (KPI). As sustainable procurement data capabilities and sustainable procurement resources advance, the Sustainable Procurement Program shall develop additional KPIs.

To the extent possible, the Sustainable Procurement Program shall develop and track KPI data at the bureau level to facilitate feedback to bureaus on sustainable procurement performance.

To facilitate continuous improvement and process efficiencies, the City shall invest in sustainable procurement spend and impact data, life cycle costing, cost-benefit, and/or supplier evaluation tracking and reporting tools as best practices in sustainable procurement metrics and data capabilities develop. The Sustainable Procurement Program shall report annually on the prioritized impact area KPIs and seek to increase reporting frequency and data access as applicable tools become available. Annual reports/KPI data shall be posted on the Sustainable Procurement Program website.

11. Policy Update and Continuous Maintenance Process

Policy Update Process

The Chief Procurement Officer and Sustainable Procurement Program staff shall periodically bring together stakeholders to review and update this policy.

Continuous Maintenance Process

Sections of this policy subject to continuous maintenance may be revised in between policy update cycles in order to incorporate new applicable initiatives, best practices, tools, capabilities and processes, and remove outdated references. Updates made to this policy through continuous maintenance will be posted on the Sustainable Procurement Program website and reference the month and year the update was made. The continuous maintenance process shall be initiated by the Sustainable Procurement Program Manager. Proposed updates shall be reviewed by applicable stakeholders for input and refinement. Proposed updates shall be approved by an internal multi-bureau stakeholder group, such as the Procurement Services Bureau Liaison Group or equivalent. Continuous maintenance updates shall occur no more frequently than once a year.

12. Definitions

The following definitions establish the meaning of key terms contained in this policy document and may be updated in between policy revisions per the continuous maintenance process.

3D: three dimensions. In the context of this policy and the Sustainable Procurement Guiding Principles, 3D refers to the three dimensions of sustainability: environmental, social, and economic.

Certified DMWESB: Disadvantaged, Minority, Women, or Emerging Small Business as certified by the State of Oregon Certification Office for Business Inclusion and Diversity (COBID).

Certified SDVB: Service Disabled Veteran Business as certified by the State of Oregon Certification Office for Business Inclusion and Diversity (COBID).

Circular Economy: Economy that is restorative and regenerative by design, and which aims to keep products, components and materials at their highest utility and value at all times, distinguishing between technical and biological cycles.[1]

Conflict Minerals: Natural resources extracted in a conflict zone and sold to finance the fighting. Conflict minerals include the metals tantalum, tin, tungsten and gold (3TG), which are the derivatives of the minerals cassiterite, columbite-tantalite and wolframite, respectively.

Ethical Behavior: Behavior that involves demonstrating respect for key moral principles including honestly, fairness, equity, diversity, and human rights.

Greenhouse Gases (GHGs): The atmospheric gases responsible for causing global warming and climate change. The major GHGs are carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O). Less prevalent, but very powerful, greenhouse gases are hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6).

Indicator: Measurable representation of the condition or status of operations, management or conditions.[1]

Key Performance Indicator (KPI): demonstrates how effectively an organization is achieving success according to objectives; helps evaluate various functions and processes important to achieving goals.

Life Cycle: Consecutive and interlinked stages of a goods or services system, from "cradle to grave", e.g. from resource generation and raw material acquisition through production, use, and final disposal.

Life Cycle Costing (LCC): Method for calculating the costs of goods or services throughout their life cycle.[1] It includes total cost of ownership (TCO) and positive or negative externalities which can be monetized, both to the City and to society.

Low Carbon Fuel: Transportation fuels with a lower carbon intensity (grams CO_2-equivalent per megajoule of fuel) as compared to conventional petroleum fuels such as gasoline and diesel. The most common low-carbon fuels are alternative fuels such as biodiesel, ethanol, and renewable diesel that can be used directly or blended with conventional petroleum fuels. Electricity, natural gas, and propane can also be considered low carbon fuels.

Precautionary Principle: A decision-making paradigm that promotes taking precautionary measures when an activity raises threats of serious or irreversible harm, even if some of the cause-and-effect relationships are not fully established.

Responsible Offeror, Bidder, Proposer: A person who has submitted an offer, bid or proposal and who meets the standards set forth in City Code sections 5.33.500 or 5.34.500, as applicable, and who has not been debarred, disqualified, or who has not failed to prequalify when prequalification is required by the solicitation document.

Servicizing: Business practice where value is provided through a combination of product and service and where customer needs are satisfied by selling the function of the product rather than product itself and/or by increasing the service component of the offer. Pay-per-copy equipment leasing and car sharing services are common servicizing examples.

Substances of (Very) High Concern (SVHC, SHC): Substances that may have serious and often irreversible effects on human health and the environment. SVHC/SHCs are typically defined as those that have one or more of the following attributes:
- Persistent, Bioaccumulative and Toxic (PBT),
- very Persistent and very Bioaccumulative (vPvB),
- very Persistent and Toxic (vPT),
- very Bioaccumulative and Toxic (vBT), or
- known or likely to be:
  - carcinogenic,

- mutagenic,
- reproductive or developmental toxicant,
- neurotoxicant or
- endocrine disrupting.

Supplier Diversity: a proactive business program which encourages the use of minority-owned, women owned, veteran owned, LGBTQ-owned, service disabled veteran owned, historically underutilized business, and Small Business Administration (SBA)-defined small business concerns as suppliers.

Sustainability: State of the global system, including environmental, social and economic aspects, in which the needs of the present are met without compromising the ability of future generation to meet their own needs. The environmental, social, and economic aspects interact, are interdependent and are often referred to as the three dimensions of sustainability.[1]

Sustainability Aspect: Aspect of a product or service or activity occurring within its life cycle that is responsible for positive or negative sustainability impacts. For example, air pollution from burning fossil fuels can occur throughout a product or service life cycle and negatively impact the health of workers and community residents (e.g. workers at production sites, residents near freight corridors or production sites, etc.).

Sustainable Procurement: Procurement that has the greatest positive environmental, social and economic impacts possible over the entire life cycle. Sustainable procurement involves the sustainability aspects related to the goods, services, and suppliers along the supply chains. Sustainable procurement contributes to the achievement of organizational sustainability objectives and to overall sustainable development.[1]

Sustainably Sourced Wood: Wood that is Forest Stewardship Council (FSC) certified, recycled, salvage, or from an ecological restoration forestry project. Ecological restoration forestry refers to management activities that contribute to the recovery of ecosystems that have been degraded, damaged, or destroyed. Some examples of ecological restoration in forests are:
- Harvesting small patches of trees to create compositional and spatial heterogeneity in uniform, single species plantations that developed after harvest of old-growth forests.
- Thinning forests that have become overgrown because of fire suppression.

13. Related Sustainability Policies and Resolutions
- Resolution 37121: 2015 Sustainable City Government Principles and 2030 Environmental Performance Objectives
- Resolution 37135: 2015 Climate Action Plan
- Resolution 37122: 2015 Green Building Policy

14. Attachments
1. Code of Conduct for Apparel Manufacturers
2. Environmentally Responsible Paper Standard
3. Clean Air Construction Standard

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Attachment 1: Code of Conduct for Apparel Manufacturers

The following Code of Conduct for Apparel Manufacturers may be updated in between policy revisions per the continuous maintenance process.
This Code of Conduct specifies minimum standards and is based on the principle that contractors, subcontractors, and suppliers within the supply chain of the prime contractor, including cut and sew manufacturers, comply with all applicable laws and regulations in their business activities. Labor practices are based upon the core conventions of the International Labor Organization (ILO), the United Nations' Universal Declaration of Human Rights and the United Nations conventions on the rights of the child and the elimination of all forms of discrimination against women.

1. **Labor Standards**
   a. **Freedom of Association and Right to Collective Bargaining**
      Contractors and their subcontractors will recognize and respect that workers, without distinction, have the right to join and form trade unions of their own choosing and to bargain collectively, and will remain strictly neutral on the matter of workers' choice to unionize or not unionize. Workers shall not be subjected to harassment, intimidation, or retaliation as a result of his or her efforts to freely associate or bargain collectively. Contractors and their subcontractors shall not interfere with, manipulate, or control organizations in which workers participate or are represented. Contractors and their subcontractors will negotiate in good faith with any union or other representative worker body duly constituted by the workers. Where the right of freedom of association and collective bargaining is restricted under law, the supplier will not hinder the development of parallel means for independent, free association and bargaining.
   b. **Freely Chosen Employment**
      Employment must be on a voluntary basis, respecting the rights of employees to decide to work or not. Contractors and their subcontractors will not use forced, illegal, or prison labor, including indentured labor or any other form of compulsory labor. Contractors and their subcontractors will not require workers to lodge deposits or their identity papers as a condition employment, or financially penalize workers for resigning.
   c. **Child Labor Avoidance**
      Contractors and their subcontractors will not employ any person that is under the age of 15, under the age interfering with compulsory schooling, or under the minimum age established by law.
      Contractors and their subcontractors acknowledge that according to the UN Convention on the Rights of the Child, a person is a child until age of 18. Contractors and their subcontractors will ensure young workers in the age group 15-17 are employed according to the protective restrictions prescribed by the law of the jurisdiction of the manufacturing facility.
   d. **Humane Treatment & Disciplinary Practices**
      Employees shall be treated with respect. Corporal punishment and other forms of coercion, abuse or harassment, whether psychological, verbal, sexual or physical, is prohibited.
   e. **Non-Discrimination**
      No worker shall be subject to any discrimination in employment, including hiring, salary, benefits, advancement, discipline, termination or retirement, on the basis of race,

nationality, age, religion, disability, gender, pregnancy, maternity leave status, sexual orientation, union affiliation, marital status, political opinion, or social or ethnic origin. No contractor or subcontractor shall require or compel any worker to use contraceptives or take pregnancy tests.

f. **Regular Hours of Work**

Workers shall not be required to work a regular work week of more than the lesser of 48 hours per week or the limits on regular hours allowed by the law of the country of manufacture and will be provided with at least one day off during every seven-day period, unless the point of assembly facility in which the labor is performed is party to a collective bargaining agreement that permits mandatory overtime, and any mandatory overtime hours are worked in conformance with a collective bargaining agreement.

g. **Overtime**

Workers shall be compensated for overtime hours, such as a premium rate, when legally required in the country of manufacture or point of assembly or, in those locations where such laws do not exist, at a rate of at least one-and-one-half their regular hourly compensation.

h. **Wages and Benefits for Regular Hours of Work**

The point of assembly facilities shall pay wages that meet the higher standard of (a) the legal minimum wage; (b) the prevailing wage in the industry in the country of production; or (c) a living wage as defined as follows. For the purposes of this section, a "living wage" is the piece-rate or hourly equivalent of what a full-time worker needs to earn in annual income that exceeds the poverty threshold for a family of three. In the United States, the living wage is based on the poverty threshold set by the U.S. Department of Health and Human Services for a family of three plus an additional 20 percent to provide for expenses that include healthcare, childcare, education, travel, and retirement savings. For other countries of production, the U.S. living wage may be adjusted to reflect a different cost of living by using an index for purchasing power parity, which is calculated by the World Bank. Workers must be paid directly and provided with clear, written accounting of hours worked, deductions and regular and overtime wages. Deductions from wages not provided for by the laws of the countries where goods are made, shall not be permitted without the express permission of the employee. Point of assembly facilities shall also maintain verifiable wages and hour records for each employee that contain the following: (a) name and job classification; (b) a general description of the work the worker performed each day and the rate of pay (including rates of contributions for, or costs assumed to provide fringe benefits); (c) the daily and weekly number of hours worked; (d) deductions made; and (e) actual wages paid.

i. **Just Cause Termination**

Point of assembly facilities shall not engage in any reprisal, coercion, intimidation or take any other adverse action against workers for filing complaints, giving evidence, or otherwise cooperating with monitoring, enforcement, remediation or other activity by the City of Portland or any other entity authorized by the City of Portland to monitor or enforce obligations under this Code.

Point of assembly facilities shall not terminate workers without just cause. Contractors shall provide for a mediation or grievance process to resolve workplace disputes. For production in the United States such disputes are limited to those not regulated by the National Labor Relations Board.

2. **Health and Safety**
   a. **Management of Health and Safety**
   Workers will be provided with a safe and healthy work environment. Conditions in all work and residential facilities shall be safe, clean, and consistent with all applicable laws and regulations regarding health and safety. The contractors and their subcontractors shall provide written health and safety guidelines for employees in terms of equipment, training, management, and work practices in the local language(s) of the employees.

3. **Cut and Run**
   Contractors and subcontractors, including point of assembly facilities, shall not shut down or reduce orders to a point of assembly facility in order to deny workers any right or standard protected by this code, or to otherwise avoid complying with this code, including their right to freely associate.

Attachment 2: Environmentally Responsible Paper Standard

The following paper requirements may be updated in between policy revisions per the <u>continuous maintenance process</u>.

Paper Selection Guiding Principles
1. **Minimize paper use**. In addition to reducing paper consumption, choose paper stock and design layouts that minimize paper waste.
2. **Recycled content paper fiber, especially post-consumer waste (PCW), is best.**
3. **Agricultural residue sources for paper fiber are also good**, **and can complement tree fiber recycled content.** Agricultural residues do not include purpose crops grown for fiber. They include agricultural residues that would likely otherwise be burned, such as wheat straw, rice straw, seed flax straw, corn stalks, sorghum stalks, cotton stalks, cotton linters, sugar cane bagasse, and rye seek grass straw.
4. **Ideally, any virgin tree fiber should be Forest Stewardship Council (FSC) certified**.
5. **Ideally, paper should be bleached using Processed Chlorine Free (PCF) and Totally Chlorine Free Bleaching Processes (TCF).**

Paper products utilized by the City shall meet Paper Profile 1 unless compliant paper is not available for the specific application; in such cases, the paper product shall meet Paper Profile 2. The term "paper product" refers to all consumer paper products, including but not limited to: copy, printing, and writing papers, newsprint, commercial sanitary tissue products, paperboard and packaging products, and other specialty consumer paper goods.

Paper Profile 1: Superior
Paper meets the following:
1. PCF or TCF bleaching process; <u>AND</u>
2. Fiber made up of the following:
    a. 100% PCW; or
    b. 100% Agricultural residue; or
    c. 100% PCW and agricultural residue mix; or
    d. 50%-99% PCW and/or agricultural residue plus 1%-50% FSC certified virgin tree fiber.

Paper Profile 2: Acceptable until Superior is Available
1. PCF or TCF or Enhanced Elemental Chlorine Free (EECF) or Elemental Chlorine Free (ECF) bleaching process (in order of preference); <u>AND</u>
2. Fiber made up of the following:
    a. 30% PCW minimum; or
    b. 30% agricultural residue minimum.
To stimulate continuous improvement towards Superior papers, give preference within the "Acceptable" category to papers that:
- Meet the "Superior" fiber mix, but haven't achieved PCF or TCF bleaching processes yet; or
- Utilize FSC certified virgin tree fiber for the non-PCW or non-agricultural residue fiber.

Attachment 3: Clean Air Construction Standard

The following requirements may be updated in between policy revisions per the <u>continuous maintenance process</u>.

Applicability & Effective Date

Effective January 1, 2020, the following requirements apply to construction projects that the City solicits and contracts for that are over $1,000,000 and when the funding for the project does not prohibit the City's ability to do so.

Standard Review

The following clean air construction requirements may be updated in between policy revisions per a continuous maintenance process. Specifically, continuous maintenance updates may be triggered by changes/developments in 1) availability of emission control technologies, 2) alternative fuel technologies, 3) expanding requirements to address other air pollutants besides diesel particulate matter.

The Clean Air Construction Standard shall be reviewed for effectiveness and updates no later than four years after the initial effective date. Results shall be published on the applicable agency's website and any proposed updates to the Standard vetted through a public stakeholder process.

Idle Reduction Requirements

Beginning January 1, 2020 contractors working on City construction projects shall take the following steps to reduce unnecessary diesel equipment idling:

- All nonroad diesel equipment must shut down after five (5) minutes of inactivity, and
- All nonroad diesel equipment shall have decals/prompts visible to the operator to remind them to shut down the equipment after five (5) minutes of inactivity, and
- Contractors will post "Five Minute Limit" signs in high foot traffic areas of the job site, visible to workers, and
- Contractors will ensure all diesel equipment operators are aware of the policy.

Exemptions to the above idle reduction requirements are allowed in circumstances where:

- the safety of contractors and their employees may be compromised if diesel equipment is turned off; for example, where employees are working in a trench; or
- the equipment meets the most stringent EPA emissions standards or has been retrofit with a DPF; or
- frequent shutdowns may be detrimental to the exhaust control system, reducing the effectiveness of that system by lowering the exhaust temperature; or
- equipment requires testing, servicing, inspection, or repairs.

Diesel Engine Requirements and Phase-In Schedule
Effective January 1, 2021 and in accordance with the phase-in schedule outlined below all diesel-powered nonroad construction equipment greater than 25 horsepower and all on-road diesel dump trucks and cement mixers used on City construction projects must meet the following requirements:

Effective Date of Diesel Engine Requirement	Nonroad Diesel (over 25hp)	On-Road Diesel (cement mixers and dump trucks)
January 1, 2020	No Idling	
January 1, 2021	No tier 0 engines allowed[1]	
January 1, 2022	No tier 1 engines allowed[1]	
January 1, 2023	No tier 2 engines allowed[1]	
January 1, 2024	No tier 3 engines allowed[1,2]	No pre-2007 engines[1,2]
January 1, 2025	Tier 4 only[1,2]	
January 1, 2026	Tier 4 only[3]	No pre-2007 engines[3]

[1]Diesel engine retrofits (emission control devices) allowed on older equipment/vehicles following the Compliance Options Protocol provided herein.
[2]No new DOC emission control devices allowed. Equipment retrofitted with DOC emission control devices prior to 2024 are allowed.
[3]No older equipment/vehicles allowed unless it was retrofitted with a DPF prior to 2026. Exemption: certified DMWESB or certified SDVB firms may use equipment/vehicles retrofitted with a DPF or DOC prior to 2024 (for DOCs) and 2026 (for DPFs).

Contractors may apply for exemptions to the above diesel engine requirements on a per project basis in circumstances where:
- The equipment/vehicle is required for an emergency (including for underground equipment operators).
- After following the Compliance Options Protocol, the required emission control device would obscure operator lines of sight or otherwise impact worker safety or the equipment is not able to be retrofit with a verified emission control device; and no compliant rental equipment is available within 100 miles of the job site.
- After following the Compliance Options Protocol, the contractor can demonstrate that due to the uniqueness of the equipment/vehicle or similar special circumstances, it is not reasonable to comply with the diesel engine requirement for a specific piece of equipment/vehicle.

Compliance and Verification
Contractors (prime and sub-contractors, and applicable suppliers) will demonstrate compliance with the Clean Air Construction Standard on an annual basis by providing to the City, or approved program operator, all requested diesel equipment/vehicle information needed to verify compliance, including confirmation that retrofit devices are maintained on the equipment in proper operating condition.
Upon determining compliance with the requirements, the City, or approved program operator, will issue an equipment/vehicle decal for each compliant piece of equipment/vehicle. This decal must be displayed on the compliant equipment/vehicle at all times in a location readily visible to City staff. In

addition, random on-site inspections by City staff (or approved program operator) will be conducted on a project by project basis.

Compliance Options Protocol

Compliance with the Diesel Engine Requirements contained herein will be determined according to the following protocol:

Protocol Step	Question(s)	Answer	Action
1	Is the nonroad equipment over 25hp? Is the on-road vehicle a cement mixer or dump truck?	YES	Go to Step 2
		NO	Register equipment and obtain compliance verification. No further action required other than anti-idling compliance on job-site.
2	Is the equipment/vehicle required for an emergency? (including for underground equipment operators)	YES	Request Exemption
		NO	Go to Step 3
3	Is the equipment/vehicle powered by electricity or alternative (non-diesel) fuel? Is the diesel cement mixer or dump truck 2007 or newer? Does the diesel nonroad equipment utilize only a Tier 4 engine(s)?	YES	Register equipment and obtain compliance verification. No further action required other than anti-idling compliance on job-site.
		NO	Go to Step 4
4	Can the equipment/vehicle be repowered or retrofit with a CARB or EPA verified DPF or equivalent?[1]	YES	Repower or retrofit equipment and obtain compliance verification.
		NO	If 2023 or earlier, go to Step 5 If 2024 or later, go to Step 6.
5 (pre-2024)	Can the equipment/vehicle be retrofit with a CARB or EPA verified emissions control device other than DPF (or equivalent)?[1]	YES	Retrofit equipment with an emission control device that maximizes diesel particulate matter emission reduction. Obtain compliance verification.
		NO	Go to Step 6
6	Is compliant rental equipment available within 100 miles of the job site?	YES	Rent equipment and obtain compliance verification.
		NO	Request Exemption.
[1]Equivalent is defined as achieving the same level (within 10%) of diesel particulate matter (PM) emissions reduction as a DPF.			

Terms/Definitions

CARB: California Air Resources Board, a state regulatory agency charged with regulating the air quality in California.

Diesel Particulate Matter – the solid or liquid particles found in the air released through the exhaust from diesel vehicles/equipment. Exposure to diesel particulate matter increases the risk of heart attack, stroke, cardiovascular disease, exacerbates asthma, and can lead to low-weight and pre-term births. Diesel particulate matter is also a known as a human carcinogen as determined by the International Agency for Research on Cancer.

DOC: Diesel oxidation catalyst. A device designed to reduce harmful diesel emissions such as carbon monoxide, hydrocarbons and certain diesel particulate emissions.

DPF: Diesel particulate filter. A device designed to trap all diesel particulate matter above a certain size.

Emission Control Device: technology added to equipment to reduce harmful emissions. These may include catalytic converters and particulate filters, among other technologies. For the purpose of this policy, all emission control technology must be verified by the EPA or CARB.

EPA: U.S. Environmental Protection Agency, a federal regulatory agency charged with regulating the environment.

EPA Nonroad Emission Ratings/Tiers

Nonroad Diesel Emission Ratings (EPA)								
ENGINE MODEL YEAR	HORSEPOWER RANGE							
	25-49	50-74	75-99	100-174	175-299	300-599	600-750	750+
1995	T0	T0	T0	T0	T0	T0	T0	T0
1996	T0	T0	T0	T0	T1	T1	T1	T0
1997	T0	T0	T0	T1	T1	T1	T1	T0
1998	T0	T1	T1	T1	T1	T1	T1	T0
1999	T1	T1	T1	T1	T1	T1	T1	T0
2000	T1	T1	T1	T1	T1	T1	T1	T1
2001	T1	T1	T1	T1	T1	T2	T1	T1
2002	T1	T1	T1	T1	T1	T2	T2	T1
2003	T1	T1	T1	T2	T2	T2	T2	T1
2004	T2	T2	T2	T2	T2	T2	T2	T1
2005	T2	T2	T2	T2	T2	T2	T2	T1
2006	T2	T2	T2	T2	T3	T3	T3	T2
2007	T2	T2	T2	T3	T3	T3	T3	T2
2008	T4a	T4a	T3	T3	T3	T3	T3	T2
2009	T4a	T4a	T3	T3	T3	T3	T3	T2
2010	T4a	T4a	T3	T3	T3	T3	T3	T2
2011	T4a	T4a	T3	T3	T4a	T4a	T4a	T4a
2012	T4a	T4a	T4a	T4a	T4a	T4a	T4a	T4a
2013	T4b	T4b	T4a	T4a	T4a	T4a	T4a	T4a

2014	T4b	T4b	T4a	T4a	T4b	T4b	T4b	T4a
2015	T4b	T4b	T4b	T4b	T4b	T4b	T4b	T4b
2016	T4b	T4b	T4b	T4b	T4b	T4b	T4b	T4b
2017	T4b	T4b	T4b	T4b	T4b	T4b	T4b	T4b
2018	T4b	T4b	T4b	T4b	T4b	T4b	T4b	T4b
2019	T4b	T4b	T4b	T4b	T4b	T4b	T4b	T4b
2020	T4b	T4b	T4b	T4b	T4b	T4b	T4b	T4b

Nonroad: Construction equipment and vehicles that fall under the EPA non-road engine equipment category, which includes all diesel equipment not intended for highway use. For the purpose of this policy, these vehicles/equipment include only diesel construction vehicles/equipment with engines larger than 25 horsepower, which includes tractors, excavators, dozers, scrapers and other construction vehicles/equipment.

City of Portland. (2018). City of Portland sustainable procurement policy (Administrative Policy

1.09). Portland, OR: City of Portland.