City of Pompano Beach Sustainability Project Portfolio and Implementation Plan





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ACKNOWLEDGEMENTS

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Max Wemyss

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1. SUMMARY

This Sustainability Project Portfolio (SPP) and Implementation Plan establishes a comprehensive portfolio of projects to drive progress towards the City's sustainability goals. The result is a comprehensive SPP consisting of 17 projects that can potentially provide a return on investment of more than \$3.2 million to the City government over ten years. These returns will come primarily from reducing energy, water, and fuel use, developing renewable energy, increasing efficiency, and improving materials management through source reduction and recycling. Project details are presented in Section 5, Sustainability Project Portfolio.

The projects have been designed to have substantial triple bottom line benefits – environmental and social as well as economic. Project benefits over a ten-year period include saving 14,000 gallons of water, 1.5 million kilowatt-hours of electricity, and 290,000 gallons of petroleum fuels, as well as keeping 2,500 tons of waste out of the landfill. The project portfolio's Greenhouse Gas (GHG) reduction benefits of nearly 2,200 metric tons of CO2 equivalents are equal to taking 474 cars off the road or protecting 2,600 acres of forest for a year. The portfolio's total carbon mitigation amounts to 71% of the City's 2030 GHG emissions reduction goal for local government operations (LGO).

The projects have been developed collaboratively via a workshop and series of follow-up meetings with City staff. This engagement leveraged staff subject matter expertise and understanding of opportunities (see Section 4 Engagement and Collaboration). This process also built capacity among staff to effectively create, implement and manage sustainability initiatives going forward.

To realize the benefits of the project portfolio, Pompano Beach must successfully implement the projects and track and report on their progress. To assist with this process, detailed scorecards were developed for each project with roles and responsibilities, cost/benefit analysis, implementation steps, and other details. The Implementation Plan in Section 6 details management strategy, budget, metrics and reporting, schedule, barriers, funding, and alignment with other City plans and programs.

The sustainability project portfolio and implementation plan will be presented to the City Commission at a public meeting on June 14, 2022. Section 7 discusses details of this public meeting and what will be presented.

In earlier phases of sustainability planning, the City established a work plan for a leading sustainability program consisting of nine conceptual initiatives phased over a 5-year period.

This project represents Phase 3 of the Work Plan, the Sustainability Project Portfolio (SPP) and Implementation Plan. Phase 1 established a qualitative baseline, vision and workplan, while Phase 2 established a quantitative baseline, goals, and greenhouse gas (GHG) inventory.

2. INTRODUCTION TO THE DOCUMENT

This document is organized into several sections:

- Section 3 describes previous sustainability planning efforts that laid the groundwork for this scope of work by defining key elements of the City's sustainability program such as vision, focus areas, baseline, and goals. Details are available in two of the City's previously completed sustainability planning documents: the Sustainability Strategy and Sustainability Goals Report.
- Section 4 details engagement and collaboration with City staff. It describes the Staff Collaborative Workshop and follow-up Working Group Meetings held to further refine and develop projects.
 Agendas, minutes and other materials from these meetings are included in Appendix B: Agenda, Slides and Minutes from Staff Workshop and Appendix C: Agenda and Minutes from Working Group Meetings.
- Section 5 summarizes sustainability benefits of the project portfolio and their contribution to the
 City's GHG emissions goal. It also provides an in depth look at each project with cost/benefit
 analysis over the project's lifecycle and analysis of environmental and social benefits, including
 GHG emissions reduction. A more detailed version of this information is provided in **Appendix A:**Project Report Cards.
- Section 6 lays out a roadmap for project implementation including management, budget, metrics and reporting, schedule, barriers and funding, and alignment with other City programs, plans and policies.
- Section 7 discusses the public meeting at which the project portfolio will be presented to the City Commission. Meeting slides are provided in Appendix D: Commission Meeting.

Pompano Beach's SPP has been funded by a grant from the Florida Department of Economic Opportunity (DEO). This document includes deliverables specified in the City's grant application and agreement with DEO. The table below is provided as a reference for the final deliverables to DEO.

TABLE 1: DEO FINAL (D2) DELIVERABLES

TABLE 1: DEO FINAL (D2) DELIVERABLES				
DEO Final Deliverables	Location			
Summary of the City's sustainability planning efforts to date	Section 3			
Portfolio of initiatives/projects	Section 5 and Appendix A			
Work Plan with budget and schedules	Section 6: Implementation Plan			
Recommendations for supportive management, funding, and reporting strategies	Section 6: Implementation Plan			
Summary of how the Sustainability Project Portfolio may be integrated or aligned with other plans and programs	Section 6: Implementation Plan			
Public hearing presentation materials	Section 7 and Appendix D			

3. POMPANO BEACH SUSTAINABILITY BACKGROUND

3.1 SUSTAINABILITY STRATEGY

The City's sustainability journey began by developing a Sustainability Strategy. This effort included a qualitative assessment of the City's sustainability baseline, benchmarking with peer cities, interviews with key City staff and members of the City Commission, establishing a Work Plan, and a collaborative workshop. The Sustainability Strategy also established focus areas and an initial Vision statement for the City's sustainability program

Vision

Vision is about setting the overall direction for the sustainability program. The City participated in a visioning activity as part of a collaborative workshop during the development of the City's Sustainability Strategy: The preliminary vision statement developed for the City's sustainability program is as follows:

"The City of Pompano Beach is committed to protecting and improving environmental quality, community cohesion and shared prosperity through innovative investment in climate change resilience, resource conservation and materials management, land use and transportation, and education and culture."

Focus Areas

The City also established focus areas as part of the Sustainability Strategy, shown in Figure 1.



FIGURE 1: COPB SUSTAINABILITY FOCUS AREAS

3.2 WORKPLAN

As part of its Sustainability Strategy, the City developed a workplan. Pompano Beach's Work Plan (Figure 2) lays out steps to build the City's sustainability program over time, while increasing sustainability performance, improving climate resilience, and effectively communicating with City residents and other stakeholders.

The Work Plan consists of nine conceptual phases completed over a five-year period, designed to realize social, environmental, economic and resilience benefits to the City.



FIGURE 2: CITY OF POMPANO BEACH SUSTAINABILITY WORK PLAN

The City previously completed Phase 1 of this work plan by completing a qualitative and quantitative sustainability baseline, including a greenhouse gas inventory. Phase 1 also included establishing short-, medium- and long-term goals for carbon emissions reductions, as well as goals to improve sustainability performance in resource conservation; materials management; land use and transportation; equity and outreach; and policy and economics. Phase 2 of the work plan, a Climate Vulnerability Assessment, has received grant funding and will begin in the second half of 2022. This project, now completed, represents Phase 3 of the work plan.

Quantitative and Qualitative Baseline, GHG Inventory and Goals

The Quantitative Baseline, GHG Inventory and Goals project established a quantitative baseline for key sustainability metrics for both the City's operations and the community. This included a comprehensive GHG Inventory and forecast for baseline year 2019. It also established a base year inventory of the City's sustainability performance in each of its six focus areas. The baseline information was used to develop Specific, Measurable, Achievable, Relevant, and Timely (S.M.A.R.T.) goals consistent with the City's sustainability vision.

3.2.1.1 Baseline

The City established a qualitative baseline as part of the Sustainability Strategy and a quantitative baseline, including a Greenhouse Gas (GHG) Inventory, in the Sustainability Goals Report. The baseline information establishes a starting point for measuring progress, as well as a benchmark against which to measure Pompano Beach's sustainability performance going forward.

3.2.1.2 Goals

The City established an of goals for its sustainability performance in each focus area. Goals were identified for the short-term (2030), mid-term (2040), and long-term (2050). Table 2 provides a summary of the goals established for the City.

TABLE 2: POMPANO BEACH SUSTAINABILITY GOALS

Goal Category	Short Term (2030)	Mid Term (2040)	Long-term (2050)
Climate Mitigation	Reduce GHG emissions 45% below 2019 baseline by 2030	Reduce GHG emissions 75% below 2019 baseline by 2040	Reduce GHG emissions to net-zero by 2050
Electricity Consumption	Reduce electricity consumption for City operations by 15% by 2030	Reduce electricity consumption for City operations by 30% by 2040	Reduce electricity consumption for City operations by 45% by 2050
Renewable Energy	Achieve 33% renewable energy supply for City operations by 2040	Achieve 66% renewable energy supply for City operations by 2040	Achieve 100% renewable energy supply for City operations by 2052
Water Use	Short Term: Reduce potable water use by 13% from 2019 baseline by 2050	Reduce potable water use by 27% from 2019 baseline by 2050	Reduce potable water use by 40% from 2019 baseline by 2050
Materials Management	Develop and implement a Sustainable Procurement Policy by 2025	66% of all City purchases meet sustainable purchasing criteria under the City's Sustainable Procurement Policy by 2040	100% of all City purchases meet sustainable purchasing criteria under the City's Sustainable Procurement Policy by 2052
Waste Diversion	Achieve a 20% LGO and community diversion rate	Achieve 55% LGO and community diversion rate	Achieve a 75% LGO and community diversion rate
Paperless Policy	Short Term: Develop a policy to reduce the use of paper in City operation by substituting electronic alternatives by 2025	45% reduction in paper use realized under the terms of the Policy by 2040	75% reduction in paper use realized under the terms of the Policy by 2052
Fleet	Transition 33% of City's fleet vehicles to non-fossil fuel sources or electricity by 2030	Transition 66% of City's fleet vehicles to non-fossil fuel sources or electricity by 2040	Transition 100% of City's fleet vehicles to non-fossil fuel sources or electricity by 2050
Green Building	Update the City's Green Building Program (Chapter 152.51) to include City-owned renovations, existing buildings, and infrastructure. Require certification at specified levels, and /or include minimum performance requirements by 2025.	30% of new construction and major renovations shall meet updated Green Building Program standards by 2040	50% of new construction and major renovations shall meet updated Green Building Program standards by 2042
Multi-modal transportation	To reduce employee commuting emissions, develop and implement an incentive program to encourage City employees to telecommute, use public transportation, walk or bicycle to work by 2025. Also establish criteria for incentivizing and evaluating multimodal trips by 2025.	Achieve a balanced transportation system with no single mode accounting for more than 20% of trips by 2040	Achieve a balanced transportation system with no single mode accounting for more than 30% of trips by 2050
Equity and Outreach	Develop an outreach and communications plan for the City's sustainability program by 2025 that addresses both City employees and community members	Conduct surveys showing at least 45% of community members are aware of and engaged with the City's sustainability programs by 2040	Conduct surveys showing at least 75% of community members are aware of and engaged with the City's sustainability programs by 2050
Policy and Economics	Establish a sustainability revolving fund (SRF) by 2025 and fund selected sustainability initiatives to be developed in Phase 3 of the Work Plan (Sustainability Project Portfolio and Implementation Plan). Note that resilience projects developed in Phase 2 of the Work Plan will require separate funding through grants, public-private partnership (P3) or other means.	None	Achieve a self-funding sustainability program in which cost savings realized by efficiency and resource conservation initiatives fund at least 50% of new initiatives by 2052

4. ENGAGEMENT AND COLLABORATION

Successful sustainability programs rely not only on technical solutions, but also on engagement and collaboration. Since initiatives often require people to change their behavior, it is essential to engage stakeholders in planning efforts so that they have a chance to learn about sustainability, contribute to solutions, and become invested in their success. In addition, it is necessary to build the capacity of City staff to effectively design, implement and manage sustainability solutions.

4.1 STAFF COLLABORATIVE WORKSHOP

RS&H held a Staff Collaborative Workshop on March 9th, 2022, which was attended by over thirty City employees. The virtual meeting incorporated the use of electronic polling and breakout sessions using a whiteboard software (Mural) to engage attendees and solicit their feedback.

Attendees were familiarized with the City's previous sustainability planning work, the sustainability work plan, sustainability vision and focus areas, and an overview of the City's sustainability baseline. Discussion also included the City's sustainability goals, the concept of backcasting, and how projects contribute to meeting goals.

Following a break, the facilitators introduced the preliminary list of projects with supporting details to the attendees and used an online polling software to get their feedback on the proposed ideas.

Finally, participants were introduced to the process of developing individualized project sustainability management plans (SMPs) for selected projects. They were given the opportunity to try developing plans themselves in a half-hour breakout session conducted using Mural. Participants were divided into three Working Groups, each encompassing two of the six focus areas for the breakout session. The three Working Groups were:

- Climate and Resilience and Resource Conservation
- Materials Management and Policy and Economics
- Land Use and Transportation and Equity and Outreach

The Mural whiteboards completed during the breakout sessions captured participant work and feedback on the selected project ideas.

See **Appendix B**: Agenda, Slides and Minutes from Staff Workshop for meeting materials from the staff collaborative workshop.

4.2 WORKING GROUP MEETINGS

Following the Collaborative workshop, a series of follow up meetings were held for each of the Working Groups. The purpose of the follow-up meetings was to present the polling results on the preliminary

projects and further discuss and develop them. The expertise and deep knowledge of the City's operations held by participants was leveraged to refine and improve the project ideas, discard those deemed unsuitable, and generate additional ideas.

Participants talked through the various elements included in the individual sustainability project management plans, including:

- Project objectives, metrics, required actions, notional costs and benefits, and potential funding sources
- Responsible parties, i.e., who would develop, implement, and manage the project
- Project contribution to the City's sustainability goals
- Economic costs and benefits
- Triple-bottom line benefits

See **Appendix C**: Agenda and Minutes from Working Group Meetings for meeting materials from the staff follow-up meetings.

5. SUSTAINABILITY PROJECT PORTFOLIO

This Sustainability Project Portfolio contains a set of 17 initiatives that will generate a net return of more than more than \$3.2 million to the City government over ten years, with an additional \$1.6 million in value to the community from enhancing solar permitting processes. They will do this while expanding public services and enhancing environmental stewardship. The returns will come from reducing energy, water, and fuel use, embracing renewable energy, increasing efficiency, and improving materials management through source reduction and recycling.

Project benefits over a ten-year period include saving 14,000 gallons of water, 1.5 million kilowatt-hours of electricity, and 290,000 gallons of petroleum fuels, as well as keeping 2,500 tons of waste out of the landfill. The project portfolio's annual Greenhouse Gas (GHG) reduction benefits of 2,040 metric tons of CO2 equivalents are equal to taking 474 cars off the road or protecting 2,600 acres of forest for a year, and amount to 71% of the City's 2030 LGO GHG emissions reduction goal. The portfolio also includes projects designed to engage employees and finance and evaluate sustainability projects.

Some of the notable project examples, with ten-year projected net present value, include:

- City-owned Solar PV \$1,240,000
- Optimize Use of Recreational Facilities \$1,220,000
- EV Fleet Transition \$214,000
- Propane Fleet Transition \$154,000
- Fleet Efficiency Upgrades \$164,000
- Hybrid Work Policy \$148,000

Some projects have no direct economic return on investment (ROI) but address important social and environmental challenges in the community, such as food deserts and green buildings. The project portfolio is designed so that projects with high financial returns help fund those that are primarily advantageous for their environmental or social benefits.

The next step is to implement these projects. A program budget and schedule has been developed. For each project, a responsible department and staffer has been preliminarily identified. The City of Pompano Beach plans to measure its performance and report results. Lessons learned will be incorporated into periodic updates of the City's operational performance. Goals will be revisited, and new projects will be added to the portfolio to meet evolving expectations, take advantage of new technologies and foster partnerships. The City plans to reinvest in these new opportunities as financial returns are realized and will also leverage external sources of funding.

Table 3 below outlines the projects the working groups developed and includes projected net economic benefits. Net benefit is the net present value of project benefits less project costs over 10 years using a discount rate of 2.5%. The investment needed is also shown. Most projects show a positive net economic benefit, meaning that project benefits exceed project costs. While some projects show a negative net economic benefit, these projects deliver important social and / or environmental benefits. Together, the portfolio of projects is estimated to generate a return on investment (ROI) of more than \$3.2 million to the City government, paying for itself in 4.7 years.

TABLE 3: SUSTAINABILITY PROJECT PORTFOLIO

Project	Net Benefit	Investment
CR1. City-owned Solar PV	\$1,240,000	\$1,015,000
CR2. Streamline Community Solar Permitting*	\$1,628,000	\$1,410,000
RC1. Energy Audits	\$5,000	\$5,000
RC2. Update Green Building / Sustainable Development Standards	-\$156,000	\$170,000
RC3. Water Audits at Selected City Facilities	\$120,000	\$25,000
RC4. Optimize Use of Recreational Facilities	\$1,220,000	\$0
MM1. Print and Paper Use Reduction	\$115,000	\$0
MM2. Sustainable Procurement Policy	\$27,000	\$0
MM3. Waste Audits at City Facilities	\$10,000	\$10,000
PE1. Hybrid Work Policy	\$148,000	\$0
PE2. Sustainability Data Management and Reporting	\$0	\$65,000
LT1. EV Fleet Transition	\$214,000	\$231,937
LT2. Propane Fleet Transition	\$154,000	\$196,000
LT3. Fleet Efficiency Upgrades	\$164,000	\$62,277
LT4. Optimize Fleet	\$50,000	\$54,578
EO1. Address Food Deserts	-\$82,000	\$85,000
EO2. Employee Sustainability Training	\$3,000	\$31,500
Total to City and Community		\$3,360,000
Total to City	\$3,232,000	\$1,950,000

*Note: CR2. Streamline Solar Permitting costs and benefits flow to community member who install solar PV, and not to the City government.

The following section of this plan is organized by focus area. Within each focus area fully developed projects are presented with cost/benefit analysis and other metrics. Where sufficient information was not available to develop projects at this time, best management practices (BMPs) are presented under "Next Steps" at the end of focus area sections. BMPs are potential projects the City should consider developing in the future, but whose scope, complexity, or data needs precluded their inclusion in the project portfolio. The City could take these "next steps" in the future to expand the project portfolio by continuing to add new projects to improve performance and reach the City's sustainability goals.

For each project, net present value (NPV) and return on investment (ROI) have been estimated. Both NPV and ROI compare the financial benefits of projects. NPV compares the difference between the costs and the benefits of a project over time. The greater the positive difference, the greater the financial benefit to the community. In addition, NPV favors projects that provide benefit sooner rather than later. ROI

measures the ratio of project's benefits to its cost expressed as a percentage – the higher the ROI, the better.

The lead department and project manager responsible for implementing the project are identified, along with total GHG emissions reduction over the 10-year life of the project, and environmental and social benefits, if applicable.

5.1 PROJECT SUSTAINABILITY REPORT CARD

This section present project details in the form of a brief "Report Card" for each project that describes objectives, measures of performance, actions necessary to implement the project, costs and benefits, and potential funding sources. The inserts show NPV, ROI, contribution to goals, social and environmental benefits, and responsibilities.

Climate and Resilience

CR1. CITY-OWNED SOLAR PV

Objective: Reduce grid energy consumption through installation of a 1 MW solar photovoltaic (PV) system. A one MW array would require about 2.5 acres, or 100,000 square feet of space. The exact location of the array is to be determined, but City staff discussed potentially locating it in the Southwest corner of the Airpark property near the City's Water Treatment Plant so electricity generated by the array could serve that facility.

Measure(s): Electricity output in kWh, percentage of Local Government Operations (LGO) demand.

Action(s): Conduct a feasibility study to determine project details such as solar potential, sizing, costs (capital and O&M costs), potential barriers such as glare hazard, and if battery storage should be included. Develop an RFP. Secure funding. Select a vendor to construct the solar

CR1. CITY-OWNED SOLAR PV

- Location: Airpark
- NPV: \$1.24 million
- ROI: 152%
- Goal: Achieve 33% renewable energy supply for LGO by 2030
- Contribution to Goal: 180%
- GHG Reduction: 4,162 MTCO2e
- Environmental Benefit: Avoided air & water pollution compared to fossil fuel generated energy
- Social Benefit: Health benefits related to improved air quality
- Lead Dept.: Engineering / CIP
- Responsibility: John Sfiropoulos

array. Track performance and benefits. This measure assumes the City will own and operate the systems. Public-private partnership contracts may be available and should be evaluated as an alternative form of project delivery.

Cost(s)/Benefit(s): Materials and installation cost is estimated at \$1 per watt based on typical ground mounted solar prices of \$0.89 to \$1.01 per watt¹, for an estimated total procurement cost of \$1 million. Capital and Operating and Maintenance costs should be validated as part of a feasibility study once the site has been selected. Benefits would include GHG emissions reduction, economic benefits from cheaper electricity, reduced air pollution, and public relations/education and outreach benefits.

¹ This cost range is based on national average prices from the Solar Industries Industry Association (SEIA) for 4th Quarter 2021 for ground-mounted solar. Solar PV prices can be highly variable and should be validated prior to construction.

Using NREL's PVWatts Calculator, a 1 MW PV array located on Airpark near the City's water Treatment Plant would receive about 5.80 kWh/m2 of solar radiation per day and could generate 1,572,759 kWh of energy per year. An array this size would provide about 462 MTCO2e GHG emissions abatement per year, or 7.2% of total LGO emissions. This would meet 16% of the City's 2030 GHG reduction goal.

Funding: To be determined. Funding could potentially come from SRF, IIJA funds, or other grant funding.

CR2. STREAMLINE COMMUNITY SOLAR PERMITTING

Objective: Support increased solar PV deployment in the community, resulting in energy savings, GHG reduction and pollution prevention benefits, by reducing solar permitting fees and streamlining the solar permitting process.

Measure(s): Annual number and kW of solar installations deployed; renewable energy generated in kWh/year.

Action(s): The City has already reduced solar photovoltaic permitting fees to a flat rate of \$260 for up to 10kW systems and \$260 plus \$10 per kW over 10 kW. The City has also earned SolSmart Gold certification for its solar permitting process. This measure proposes that the City maintain the expedited solar permitting process to reduce regulatory and scheduling barriers for community members who wish to install solar. As part of this measure, the City should seek to encourage solar development by conducting education and outreach to inform community

CR2. STREAMLINE COMMUNITY SOLAR PERMITTING

- Location: Community-wide
- NPV: \$0
- ROI: ∞
- Goal: Achieve Reduce community GHG emissions 45% by 2030
- Contribution to Goal: 0.033%
- GHG Reduction: 252 MTCO2e per year by year 10
- Environmental Benefit: Avoided air & water pollution compared to fossil fuel generated energy
- Social Benefit: Health benefits related to improved air quality
- Lead Dept.: Building Division
- Responsibility: Carpelo Jeobaum

members about the reduced fees and SolSmart certification. This could be achieved by featuring them on the City's website, holding informational events, radio announcements, etc. An expedited permitting process simplifies permitting requirements and shortens approval and inspection times through strategies such as simplifying documentation, allowing electronic submittals, and limiting the number of inspections. Academic research from California cities has shown expedited permitting can increase solar deployment by as much as 22% (Hsu, J.H.-Y, 2018). This measure conservatively assumes a 5% annual increase in solar deployments as a result of the reduced fees and streamlined permitting.

Cost(s)/Benefit(s): The City has already approved the ordinance reducing permit fees for solar installations and earned the SolSmart certification, so no further costs to the City are estimated. It is assumed that education and outreach to inform community members about the initiative can be done by City staff under existing operating budgets. The cost of installing the additional solar systems to the community members who choose to dop so would be \$1.41 million over ten years. Benefits of increased solar deployment include electricity cost savings to community members who install solar, GHG emissions reductions, and pollution prevention benefits. Estimated dollar value of renewable energy produced by increased solar deployment as a result of the initiative would be about \$3.47 million over ten years at utility rates escalated for inflation. The value of this benefit would flow to the residents who installed solar, not to the City government. Increased solar deployment would result in environmental benefits such as

reduced air and water pollution compared to fossil fuel generated electricity, and social benefits such as health benefits and job creation.

Funding: No funding needed.

Resource Conservation

RC1. ENERGY AUDITS and RETRO-COMMISSIONING

Objective: Reduce energy consumption of selected city facilities (Emma Lou Olson Civic Center and Herb Skolnick Community Center) through identification, design and construction of cost-effective energy efficiency and conservation measures.

Measure(s): Electricity consumption (kWh)

Actions: Obtain professional services to conduct energy audits of the following city buildings: Emma Lou Olson Civic Center and Herb Skolnick Community Center. Based on results of audits, design cost-effective recommended energy efficiency and conservation measures and construct / install those measures. Evaluate major building systems (HVAC, lighting, building automation, water heating and building envelope) using design reviews, energy audits and/or retro-commissioning (RCx) techniques for opportunities to implement cost-effective retrofits that reduce energy consumption. Apply best management practices from these audits to other City facilities.

Cost(s)/Benefit(s): Professional energy auditing services are estimated at a median cost of \$0.16 per square foot (sf) based on a typical range of \$0.08-\$0.24 per sf. Design and

RC1. ENERGY AUDITS & RETRO-COMMISSIONING

- Location: Selected City Buildings (Emma Lou Olson Civic Center and Herb Skolnick Community Center)
- NPV: \$5,000
- ROI: >100%
- Goal: Reduce electricity consumption for LGO 15% by 2030
- Contribution to Goal: 1.8%
- GHG Reduction: 19 MTCO2e
- Environmental Benefit: Reduced pollution associated with energy use reduction
- Social Benefit: More efficient buildings / improved occupant comfort
- Lead Dept.: Facilities Maintenance
- Responsibility: George
 Buenaventura

construction costs are estimated at \$0.33 per saved kWh saved. Benefits are based on reducing baseline electric consumption for selected City buildings by about 12% on average at an avoided resource cost rate of \$0.1565 / kWh, projected to increase by 2.4% on average based on the CBO's Economic Projections for 2018 - 2027 for the Consumer Price Index. First year benefits are estimated at \$0 on the assumption that efficiency upgrades will take one year to complete. Second and subsequent year benefits assume that energy efficiency projects are complete by the beginning of the year. Benefits do not include commercial energy efficiency rebates that may be available from FPL, since eligibility depends on the specific scope of improvements.

Funding: Funding through operating budgets for facility upgrades.

RC2. UPDATE SUSTAINABLE DEVELOPMENT STANDARDS

Objective: Modify the City's existing Sustainable
Development Standards (Zoning Code Section 155.5 Part
8) to modernize the standards and make them more
effective by eliminating points for items that are standard
practice for most projects or are too easily accomplished
(e.g., infill, ENERGY STAR, etc.) Revise point system to favor
green building outcomes valued by the City, such as
energy efficiency, water conservation, resilience, EV-ready
status, renewable energy, and waste minimization.

Measure(s): Improve commercial and multifamily energy performance by 10% and 15% relative to the Florida Building Energy Code. Establish additional measures over time

Action(s): Establish an interdepartmental team composed of membership from Sustainability, City Manager's Office, Development Services and Public Works to review the current Sustainable Development Standards. Develop an RFP for a consultant to evaluate the standards, conduct stakeholder outreach to the development community, recommend revisions to the Zoning Code and update the

RC2. UPDATE SUSTAINABLE DEVELOPMENT STANDARDS

- Location
- NPV: \$(156,000)
- ROI: -100%
- Goal: Update the City's Green Building Program (Chapter 152.51) to include City-owned renovations, existing buildings, and infrastructure. Require certification at specified levels, and /or include minimum performance requirements by 2025.
- Contribution to Goal: 100%
- GHG Reduction: Not quantified
- Environmental Benefit: Energy, water, and resource conservation
- Social Benefit: Healthier and more efficient buildings
- Lead Dept.: Sustainability
- Responsibility: Max Wemyss

Sustainable Development Standards Manual. Obtain approval from the City Commission and implement the revised standards. In addition, clarify the applicability of the Sustainable Development Standards to new construction and major renovations of local government facilities and establish criteria for when City facility projects should pursue LEED certification. Establish clear rules for which City department(s) will be responsible for maintaining LEED credentials once projects are completed.

Cost(s)/Benefit(s): Costs include consulting services to develop a plan for revising the Sustainable Development Standards and Manual, and for outreach to the Development community. Benefits would include energy, water, and waste disposal savings, associated GHG emissions reductions, renewable energy generation, enhanced resilience, and provision of EV charging infrastructure for new community buildings and government facilities built and renovated under the revised standards. Benefits are not quantified for this initiative due to uncertainty about the details of proposed revisions.

Funding: The City should research grant funding options for this project. Federal Housing and Urban Development (HUD) Community Challenge Grants (https://www.hud.gov/hudprograms/sci) are one potential funding source.

RC3. WATER AUDITS AT SELECTED CITY FACILITIES

Objective: Conserve water by increasing the efficiency of city irrigation systems. Conduct irrigation water audits at selected parks and other facilities (5 accounts including: Aquatics Pool Bldg. (21598), Fire Station 61 (4114), Pompano Beach Park (42662), Hillsboro Inlet Marina West (26856), City Hall, Commission Bldg. (57254). Target savings of 20% of water use in accounts associated with irrigation relative to the 2019 baseline potable water usage. Strategies recommended by water audits could include converting sprinklers to drip irrigation, using more efficient sprinkler heads, using weather and/or sensor-based irrigation controls, and properly maintaining irrigation systems.

Measure(s): Gallons of water used for irrigation in targeted accounts

Action(s): Conduct irrigation audits to determine opportunities for water conservation. Procure and install water-efficient equipment to replace existing equipment for the selected irrigation systems. Perform ongoing maintenance to ensure irrigation systems are operating as efficiently as possible.

RC3. WATER AUDITS AT SELECTED CITY FACILITIES

- Location: Selected high irrigation usage accounts: Aquatics Pool Bldg (21598), Fire Station 61 (4114), Pompano Beach Park (42662), Hillsboro Inlet Marina West (26856), City Hall, Commission Bldg. (57254)
- NPV: \$120,000
- ROI: >100%
- Goal: Reduce LGO potable water use 13% by 2030
- Contribution to Goal: 2.4%
- GHG Reduction: 14.013 MTCO2e
- Environmental Benefit: Water conservation
- Social Benefit: N/A
- Lead Dept.: Water Conservation
- Responsibility: Whitney Walsh and George Buenaventura

Cost(s)/Benefit(s): Implementation costs are estimated at \$5,000 installed, per system on average. Benefits are based on avoided water charges, estimated at \$10.60 per thousand gallons (kgal) saved. Values are projected to increase by 2.4% on average based on the CBO's Economic Projections for 2018 - 2027 for the Consumer Price Index. Project assumes irrigation audits and upgrades are completed in year 1 and savings begin to be realized in year 2. This analysis assumes the City applies for and receives a rebate from Broward County's water conservation program, which reimburses one hundred percent of the cost of water audits.

Funding: This project could likely be funded out of operating budgets

RC4. OPTIMIZE USE OF RECREATIONAL FACILTIES

Objective: The City's Recreational facilities currently operate 8 am-8 pm but are underutilized during some of these hours This project would optimize the open hours of the facilities in order to better match the hours they are actually used, while saving energy and labor costs, and freeing up staff for other activities. Hours the facilities are underutilized are reduced, while additional hours when there is community demand are added, for instance on Sundays at some locations. Overall, hours are reduced while better matching community needs.

Measure(s): Electricity use in kWh, labor cost savings
Action(s): City staff developed a list of facilities to include
in the project; determined current operating hours and
energy usage of the facilities; and developed proposed,
optimized operating hours. This information was used to
estimate energy savings benefits based on reduced
lighting and plug loads under the new operating hours.
Project implementation would consist of implementing the
optimized schedules, including adjusting mechanical and
lighting system schedules, and conducting education and
outreach to inform the public about the changes and their
associated sustainability benefits.

RC4. OPTIMIZE USE OF RECREATIONAL FACILITIES

- Location: Selected Recreational Facilities: Charlotte Burrie, E. Pat Larkins, Highlands Park, Mitchell Moore, and McNair.
- NPV: \$1,220,000
- ROI: ∞
- Goal: Reduce electricity consumption for LGO 15% by 2030
- Contribution to Goal: 3.8%
- GHG Reduction: 44 MTCO2e
- Environmental Benefit: Avoided pollution associated with energy use, resource conservation
- Social Benefit: Operating hours better aligned to community
- Lead Dept.: Parks and Rec
- Responsibility: Kaitlyn Keri

Cost(s)/Benefit(s): This is a low/cost no cost initiative requiring minimal staff time to implement. Benefits include energy savings from reduced lighting and plug load demand because of abbreviated operating hours, associated environmental and GHG benefits, labor cost savings to the City, and facility hours that are better aligned to the needs of the community.

Funding: No funding needed.

Materials ManagementMM1. PRINT AND PAPER USE REDUCTION

Objective: Reduce City paper usage by implementing a paperless office policy and using digital technologies to replace the need to print and maintain paper files.

Measure(s): Reduction in reams of paper used and associated cost savings in USD.

Action(s): Develop a baseline for annual paper use in the City. Develop and implement a paperless office policy. Incorporate existing programs such as transitioning to paperless process for solicitations at the department level and providing justification for purchasing new printers. Track paper reduction as the policy is implemented. The measure targets a 5% decrease in paper use per year as the policy is implemented and enforced. Internal education and outreach efforts are needed to ensure compliance with the policy.

Cost(s)/Benefit(s): No costs are assumed for this project. Staff time will be needed to draft the paperless office

policy and roll it out to City departments. Benefits will include costs savings from avoided use of paper, printer time, and ink/toner, and avoided disposal costs of used paper. For the purposes of this measure, costs are estimated on the basis of avoided paper use at the 2022 average price of \$8.28 per ream (500 pages). A 30% reduction in paper use is projected by year five.

Funding: No funding needed.

MM2. SUSTAINABLE PROCUREMENT POLICY

Objective: Preferentially purchase consumables, durable goods, and cleaning products and materials that will enhance ecological sensitivity, promote the health and safety of staff and citizens, and reduce operating expenses. Realize the City's role in creating a market for sustainable goods and foster an atmosphere of innovation. Act as a catalyst for entrepreneurship. Minimize the use of non-essential materials and practices.

Measure(s): Comprehensively track purchases of consumables, durable goods and cleaning products by costs that meet criteria established under this program and compare to total purchases in those categories.

Action(s): Create a staff team to draft the sustainable purchasing policy. Gradually increase its scope over time, beginning with electronic equipment with the ENERGY STAR label, office supplies with recycled content, and

MM1. PRINT AND PAPER USE REDUCTION

- Location: City Facilities All Departments
- NPV: \$115,000
- ROI: 100%
- Goal: Develop a policy to reduce the use of paper in City operations by 2025
- Contribution to Goal: 100%
- GHG Reduction: 114 MTCO2e
- Environmental Benefit: Resource conservation, pollution prevention, preserve forests
- Social benefit: Health benefits related to pollution prevention
- Lead Dept.: Sustainability
- Responsibility: Max Wemyss

MM2. SUSTAINABLE PROCUREMENT POLICY

- Location: City Hall
- NPV: \$31,000
- ROI: ∞
- Goal: Reduce electricity consumption for LGO 15% by 2030
- Contribution to Goal: 5.7%
- GHG Reduction: 59 MTCO2e
- Environmental Benefit: Reduced pollution and waste.
- Social Benefit: Reduced health risks from safer cleaning materials
- Lead Dept.: Procurement
- Responsibility: Carla Byrd

cleaning products and materials that meet standards such as Green Seal or Environmental Choice. The policy would require purchases to meet various sustainability criteria. Criteria would require products to be energy efficient, water efficient, recyclable, fair trade, and/or socially responsible. Preference should be given to products that are purchased in bulk or have reduced packaging or recyclable packaging to reduce waste. Once implemented, the City will need to educate purchasers about the policy and its benefits. The City should comprehensively track the percentage of purchases that meet the Sustainable Purchasing Policy criteria and report results annually. The program could be gradually expanded to include RFPs and procurement from contractors working on behalf of the City.

Cost(s)/Benefit(s): Costs for more sustainable office supplies and cleaning materials are typically similar to less sustainable (i.e., conventional) purchases. For some products, environmentally preferable purchases may be more expensive than conventional alternatives. To keep costs under control, the sustainable purchasing policy could have an exception for purchases that would result in a significant incremental cost. The key is to make the sustainable purchase the default option and give require the purchaser to justify why the conventional option was selected. The market for green products and services is expanding which will likely bring down costs over time. Research will have to be done to identify replacement products that provide similar performance and enhanced sustainability benefits without a price premium. ENERGY STAR electronics are typically available at no incremental cost, and replacement of legacy models is assumed to happen over time without incremental cost. Electricity savings assume 20% of legacy electronics are replaced with ENERGY STAR devices each year. Energy savings are estimated at an average of 28% using the Savings Calculator for ENERGY STAR Qualified Office Equipment. After 5 years, all devices are assumed to be ENERGY STAR. In addition to energy savings and associated GHG reductions, this project could have additional environmental benefits that are unquantified, such as pollution prevention and reduced waste to landfill. Social benefits include improved health and wellness, reduced liability, and reputational benefits.

Funding: Staff time under existing operating budgets.

MM3. WASTE AUDITS AT CITY FACILITIES

Objective: Characterize the waste stream by conducting a waste audit and identify opportunities to reduce waste volumes, lower waste disposal costs, reduce greenhouse gas emissions, and increase recycling revenues. Investigate waste diversion opportunities using waste sort results. Negotiate recycling revenue in contracts as they are renewed.

Measure(s): Waste reduction and increased recycling, in tons.

Action(s): Procure / award a task order to perform a waste audit of selected representative City facilities. For the purposes of this project concept, the City would conduct waste audits at two locations: City Hall and a community center or other location that serves the public. The waste audit would involve removing materials from dumpsters, sorting and weighing the material, analyzing finds, and

MM3. WASTE AUDITS AT CITY FACILITIES

- Location: Selected Facilities
- NPV: \$10,000
- ROI: 29%
- Goal: Achieve a 20% LGO waste diversion rate by 2030
- Contribution to Goal: 46%
- GHG Reduction: 7,608 MTCO2e
- Environmental Benefit: Resource conservation, reduced waste to landfill
- Social Benefit: Health benefits related to reduced pollution
- Lead Dept.: Solid Waste Services
- Responsibility: Beth Dubow

issuing a report. Based on the results of the audit, evaluate efficacy of current recycling program and waste contracts. Develop recommendations for enhancing performance, as applicable. Review Waste disposal/recycling contracts as they come up for renewal. As feasible, renegotiate contracts to include revenue from recyclable commodities identified through the waste audit

Cost(s)/Benefit(s): For the purposes of this concept, costs are estimated at \$10,000 for a single-day waste audit (\$5,000 per location). Staff time will be required to review and renegotiate contracts, but these costs are assumed to be covered within the City's existing operating budgets. Benefits will include a better understanding of the City's waste stream and identification of potential opportunities for cost reductions from right-sizing waste infrastructure, and/or receiving recycling revenue. Once completed, the waste sort will provide the necessary information to quantify benefits in greater detail. For the purposes of this measure, it is assumed that these efforts result in a 2.5% per year increase in recycling. Recycling revenue potential is conservatively estimated at \$10 per ton. In the US, approximately 24% of MSW is recycled, and Waste Management (WM) is projecting an average blended value for recyclables of \$125 per ton in 2022. This would translate to \$29.50 per ton of MSW in potential recyclable value. The City's existing contract with WM expires in 2022. Under the City's existing waste disposal contract, the City does not pay for waste picked up from its facilities separately as these costs are bundled into the community-wide contract. As a result, cost savings from reduced infrastructure are not estimated. Restructuring the contract could make it possible to recover savings from reducing containers and pickups if not justified by volumes quantified by the waste audit or if needs are reduced due to waste diversion. The current contract does not provide recycling revenue, but this could be renegotiated. Non-economic benefits include reduced GHG emissions, reduced landfill disposal, conservation of resources, and greater awareness among City employees and the public.

Funding: This project is low cost and could be funded under existing operating budgets.

Supporting Initiatives:

Waste Minimization Plan

This plan would include the development of a waste minimization or waste management plan that identifies targets, goals, metrics, strategies, and measures to increase diversion and or reduce waste generation, including increasing recycling diversion rates and supporting the City's waste diversion goal.

The City should procure a study from a firm specializing in Waste Minimization. The study would include a review of waste management contracts as they near renewal and evaluate opportunities for costs savings and/or recycling revenue. The study should also identify education and outreach needed to promote source reduction, recycling, and composting in the community, with the aim of increasing diversion rates. In additional to community waste disposal and recycling, the study should evaluate ways to increase diversion in City facilities, and at events. The study should result in a report with prioritized, actionable strategies to increase waste diversion, recover recycling revenue, minimize waste, and reduce waste disposal costs.

Once the Waste Minimization plan is complete, a project could be developed to implement the plan's recommendations and achieve the expected benefits.

Land Use and Transportation

LT1. EV FLEET TRANSITION

Objective: Reduce fuel use and expenditure, as well as air and greenhouse gas emissions by transitioning 28 Light Duty Vehicles (LDVs) using gasoline-fueled internal combustion engines (ICE) and travelling more than about 8,000 miles per year to Electric Vehicles (EVs) at the end of their useful life.

Measure(s): Number of vehicles transitioned per year. Avoided gasoline use and expenditure.

Action(s): Identify vehicles for replacement each year based on remaining useful life and applicable duty cycle. Specify an equivalent EV (e.g., Chevy Bolt, Chevy EUV, Ford F-150 Lightning, Ford e-Transit) instead of replacing LDV with a gasoline powered LDV. Procure the vehicle via purchase or lease. Procure and install electric vehicle support infrastructure (EVSE) to charge new electric vehicles. Train existing fleet maintenance staff in diagnosis,

LT1. EV FLEET TRANSITION

- Location: Not applicable
- NPV: \$214,000
- ROI: 116%
- Goal: Transition 33% of City's fleet vehicles to non-fossil fuel sources or electricity by 2030
- Contribution to Goal: 27%
- GHG Reduction: 1,101 MTCO2e
- Environmental Benefit: Reduced criteria pollutants / improved air quality
- Social Benefit: Improved community health
- Lead Dept.: Fleet
- Responsibility: Forrest Hall

testing and repair of electric vehicles, hybrid-electric vehicles and EVSE.

Cost(s)/Benefit(s): Costs assume the incremental cost of purchasing an EV versus and equivalent ICE vehicle - for this case, a Chevy Bolt vs. a Chevy Malibu, a Chevy EUV vs. a Ford Escape, a Ford F-150 Lightning vs. a Ford F-150 and a Ford e-Transit vs. a Ford Transit. On this basis, the estimated incremental cost is about \$5,300 per vehicle based on Manufacturer's Suggested Retail Price (MSRP) values. One electric vehicle charge port is procured for each vehicle. The project assumes that the charging station is bollard-mounted, non-networked and provides two charge ports per station, at an installed cost of \$2,300 per station. Training is assumed to cost about \$1600 per person and include nine individuals. Benefits assume a reduced fuel cost per mile (FCM) for EVs versus ICE LDVs using the City's 2019 VMT data. The average FCM benefit is assumed to be a 68% reduction, based on data published by EPA. Taxes and fees, maintenance, or insurance costs are assumed to be the same for EVs and ICE vehicles. No more than 5 vehicles by type are procured in any year. The project does not assume replacement of EVs over the 10-year project life. No tax or other incentives are included in benefit estimates.

Funding: The project assumes that vehicles are purchased using general fund resources or leased.

LT2. PROPANE FLEET TRANSITION

Objective: Reduce fuel use and expenditure, as well as air and greenhouse gas emissions by transitioning 25 Medium Duty Vehicles (LDVs) using gasoline- or diesel- fueled internal combustion engines (ICE) and travelling more than about 8,000 miles per year to propane Autogas at the end of their useful life. **Measure(s):** Number of vehicles transitioned per year. Avoided gasoline use and expenditure. **Action(s):** Identify vehicles for replacement each year based on remaining useful life and duty cycle.

Purchase and install a propane Autogas bi-fuel kit along with new replacement vehicles equivalent to a

Ford F-250/350/450/550. Enter a contract with a propane marketer for fuel, which includes the amortized price of fueling infrastructure as part of the negotiated price per gallon. Train existing fleet maintenance

staff in diagnosis, testing, and repair of propane Autogas vehicles.

Cost(s)/Benefit(s): Costs assume the cost of a bi-fuel propane kit estimated at \$6,800 per vehicle based on vendor quotes. The cost of new vehicles is not included since the project assumes replacement of vehicles at the end of their useful life. The cost of fueling infrastructure is assumed to amortized into the cost per gallon of propane, estimated at \$2.09 per gallon based on vendor quotes. Training is assumed to cost about \$1600 per person for nine individuals. Benefits assume a reduced fuel cost per mile (FCM) for propane bi-fuel vehicles versus ICE LDVs using 2019 VMT data. The average FCM benefit is assumed to be a 42% reduction, based on industry quotes and published US government research. Alternative fuel excise tax benefits are assumed and incorporated into the projected fuel cost per gallon. The project assumes that

LT2. PROPANE FLEET TRANSITION

- Location: Not applicable
- NPV: \$154,000
- ROI: >100%
- Goal: Reduce LGO GHG Emissions 45% below 2019 baseline by 2030
- Contribution to Goal: 3.8%
- GHG Reduction: 865 MTCO2e
- Environmental Benefit: Reduced criteria pollutants / improved air quality
- Social Benefit: Improved community health
- Lead Dept.: Fleet
- Responsibility: Forrest Hall

there are no other differences in fees, maintenance, or insurance costs for propane bi-fuel vehicles vs. gasoline or diesel vehicles. No more than 5 vehicles by type are procured in any year. The project does not assume replacement of propane vehicles over the 10-year project life.

Funding: The project assumes that vehicles are purchased using general fund resources or leased.

LT3. FLEET EFFICIENCY UPGRADES

Objective: Reduce fuel use and expenditure, as well as air and greenhouse gas emissions by transitioning 41 Light Duty Vehicles (LDVs) using gasoline- or diesel- fueled internal combustion engines (ICE) and travelling more than about 2,000 miles per year (MPY), but less than 8,000 MPY to fuel-efficient equivalents (e.g., Hybrid-electric Vehicles (HEVs)) at the end of their useful life.

Measure(s): Number of vehicles transitioned per year. Avoided gasoline use and expenditure. **Action(s):** Identify vehicles for replacement each year based on remaining useful life and duty cycle. Specify a fuel-efficient equivalent (e.g., Ford Escape HEV, Ford Explorer HEV, Ford Maverick HEV, Ford F-150 HEV) instead of replacing LDVs with a standard gasoline powered model. Procure the vehicle via purchase or lease.

Cost(s)/Benefit(s): Costs assume the incremental cost of purchasing an HEV versus and equivalent vehicle - for this case, a Ford Escape HEV vs. a Ford Escape, a Ford Explorer HEV vs. a Ford Explorer, a Ford Maverick HEV vs. a Ford Ranger, and a Ford F-150 HEV vs. a Ford F-150. This results in an average incremental cost of about \$4,000 per vehicle based on MSRPs. Training is assumed to be provided to existing staff via the electric vehicle project and are not included here. Benefits assume a reduced fuel cost per mile (FCM) for HEVs versus standard LDVs using 2019 VMT data. The average FCM benefit is assumed to be a 46% reduction, based on data published by EPA. Taxes and fees, maintenance, and insurance costs are assumed to be the same for HEVs and standard vehicles. Approximately 8 vehicles are procured per year for five years. The project does not assume replacement of HEVs over the 10-year project life. For the purposes of calculating progress

LT3. FLEET EFFICIENCY UPGRADES

- Location: Not applicable
- NPV: \$164,000
- ROI: >100%
- Goal: Transition 33% of City's fleet vehicles to non-fossil fuel sources or electricity by 2030
- Contribution to Goal: 20%
- GHG Reduction: 572 MTCO2e
- Environmental Benefit: Reduced criteria pollutants / improved air quality
- Social Benefit: Improved community health
- Lead Dept.: Fleet Management
- Responsibility: Forrest Hall

towards the City's goal of no-fossil fueled vehicles by 2050, hybrid vehicles are counted at 50% of an electric vehicle.

Funding: The project assumes that vehicles are purchased using general fund resources or leased.

LT4. OPTIMIZE FLEET

Objective: Optimize the fleet to reduce fuel consumption and associated emissions by removing approximately 27 vehicles from service based on annual VMT or fuel consumption. Where warranted, replace vehicles with about 14 new, fuel-efficient vehicles that will serve as pool vehicles to be shared by staff.

Measure(s): Number of vehicles removed from the fleet per year due to under-utilization. Avoided gasoline use and expenditure.

Action(s): Identify vehicles for divestment each year based on utilization, remaining useful life, and duty cycle. When removing multiple vehicles from service to a City department, specify a fuel-efficient vehicle to serve as a pool vehicle (e.g., Ford Escape Ford Explorer HEV, Ford Maverick HEV, Ford F-150 HEV). Procure the vehicle via purchase or lease.

LT4. OPTIMIZE FLEET

- Location: Not applicable
- NPV: \$50,000
- ROI: >100%
- Goal: Reduce LGO GHG Emissions 45% below 2019 baseline by 2030
- Contribution to Goal: 1.98%
- GHG Reduction: 166 MTCO2e
- Environmental Benefit: Reduced criteria pollutants / improved air quality
- Social Benefit: Improved community health
- Lead Dept.: Fleet Managemer
- Responsibility: Forrest Hall

Cost(s)/Benefit(s): Costs assume the incremental cost of purchasing an HEV versus an equivalent vehicle - for this case, a Ford Escape HEV vs. a Ford Escape, a Ford Explorer HEV vs. a Ford Explorer, a Ford Maverick HEV vs. a Ford Ranger, a Ford F-150 HEV vs. a Ford F-150. The resulting average incremental cost is about \$4,000 per vehicle based on MSRPs. Training is assumed to be provided to existing staff via

the electric vehicle project and are not included here. Benefits assume avoided fuel expenditure from vehicles removed from the fleet. Additional cost savings, including maintenance and insurance are not included in this analysis. Benefits also assume reduced fuel cost per mile (FCM) for HEVs versus standard LDV pool vehicles using 2019 VMT data. The average FCM benefit is assumed to be a 46% reduction, based on data published by EPA. Savings from avoided taxes and fees, maintenance, or insurance costs are not included because data was not available for analysis. However, they are expected and will improve the economic performance of this project. The project assumes that underutilized vehicles are removed from the fleet as rapidly as possible, with pool vehicles added back gradually to meet demand. The project does not assume replacement of HEV pool vehicles over the 10-year project life.

Funding: The project assumes that vehicles are purchased using general fund resources or leased.

Supporting Initiatives:

SUSTAINABLE STREETS MASTERPLAN

This initiative would develop a Sustainable Streets Masterplan / multimodal transportation plan / bicycle and pedestrian plan, supporting the Multi-modal Transportation and Climate Action goals. The City would issue an RFP and hire a consultant to develop the Sustainable Streets Masterplan.

The Sustainable Street Masterplan could include elements such as a walking trail program, level of service (LOS) standards for bicycle and pedestrian access, identifying opportunities to attract multimodal transportation service to the City (e.g., connecting transit to casino development, supporting FEC corridor light rail (north of City Hall), and/or enabling alternative transportation strategies such as car-sharing, dockless mobility, etc. Pompano Beach currently has a Freebee-type service called Circuit that is limited to E. Atlantic and the beach, a Community Shuttle, a Water Taxi service, and is establishing park and ride city lots dubbed "mobility hubs". The Sustainable Streets Masterplan would seek to expand on the multimodal options that have seen success in the City as well as add additional transportation options for residents and visitors.

The Sustainable Street Masterplan should include design criteria that would improve the sustainability of streetscape projects in the City. Criteria could include complete streets designs for multimodal access, provisions for safe, efficient LED lighting and automated lighting controls, stormwater management through low impact development (LID), landscaping with native plants, drought and/or salt-resistant species, provision of shade trees, high albedo/reflective pavement designs to address heat island effects and mitigate global warming, low-carbon materials, reclaimed construction materials, and strategies to improve biodiversity and habitat for urban wildlife. The plan should also consider community resilience to climate change impacts including extreme precipitation, heat, and sea level rise.

The Sustainable Streets Masterplan would have environmental benefits including reduced GHG emissions and air pollution, improved stormwater quality, and energy savings. Social benefits would include health benefits associated with an active lifestyle encouraged by bicycle and pedestrian facilities, and with improved air quality. It would contribute to the City's goal of achieving a balanced transportation system with no single mode accounting for more than 30% of trips by 2050.

Equity and Outreach

EO1. ADDRESS FOOD DESERTS

Objective: Identify and implement solutions to address food insecurity in vulnerable areas of Pompano Beach. The USDA defines an urban food desert as an area where at least 500 people or 33% of the population lives more than 1 mile from the nearest large grocery store.

Measure(s): Income and population density by census tract and percentage of population that lives more than one mile to a large grocery store.

Action(s): Issue an RFP for a Study to identify areas of the City subject to food insecurity and lack of access, identify stakeholders and potential partners, prioritize potential solutions, and identify grant funding. The study should evaluate and compare the suitability of potential solutions

EO1. ADDRESS FOOD DESERTS

- Location: Areas of Pompano Beach that lack access to healthy food
- NPV: \$(82,000)
- ROI: -100%
- Goal: N/A
- Contribution to Goal: N/A
- GHG Reduction: N/A
- Environmental Benefit: N/A
- Social Benefit: Improved nutrition and health outcomes
- Lead Dept.: TBD
- Responsibility: TBD

such as: farmers markets, bus-stop farmers markets, community gardens, food pantries, food coops, government-subsidized grocery stores, government-owned grocery stores, and working with private businesses such as local Tienda / Bodega / Convenience stores to provide fresh produce and healthy food options. The study should identify community stakeholders and potential partners such as non-profit groups, faith-based organizations, and. private businesses. It should evaluate grants and other funding opportunities and prioritize proposed solutions and partnerships, including analysis of their costs and impacts. Following the study results, the City should work to secure funding and implement one or more of the proposed solutions.

Cost(s)/Benefit(s): Cost are estimated for two items: a food desert study and implementing recommended solutions from the study. The cost of the food desert study is estimated at \$35,000. Costs of implementing solutions may vary widely depending on the initiative(s) chosen and their design and scope. For illustrative purposes, costs are modeled on a case study of the NoMi Food Market, a joint venture between the City of North Miami, Feeding South Florida, and Florida Blue Foundation. This free food pantry was funded with \$50,000 from the city of North Miami, a \$50,000 grant from the state of Florida and an annual \$200,000 grant from the Florida Blue Foundation. Under this scenario, the City is assumed to provide \$50,000 in funding, with the remainder coming from grant funding and/or non-profit partners. Benefits of this initiative include reduced food insecurity in Pompano Beach, improving community resilience, ensuring residents have access to affordable, healthful local foods, and improved health outcomes for community members. Benefits would include improved nutrition and health outcomes for food insecure residents of the City, which also could result in less need for medical services. The benefits are not quantified as details such as the exact location of the food pantry and number of people served are not yet known. The food desert study would provide information that could be used to model project costs and benefits in more detail.

Funding: The City should research potential grant funding to address food insecurity. The America's Healthy Food Financing Initiative, which provides grant funding to address food insecurity, has an online

map that shows multiple areas of Pompano Beach meet their eligibility criteria. In addition, grant funding may be available through the state of Florida.

EO2. EMPLOYEE SUSTAINABILITY TRAINING

Objective: Increase employee awareness of City sustainability programs and policies. Help to achieve behavior change in City employees so that they conduct their daily activities in a more sustainable way. Increase employee participation in sustainability initiatives. Educate employees about sustainability initiatives the City offers so that they are better able to educate residents. Gather input and feedback from staff members about sustainability programs/policies.

Measure(s): Ensure 100% of staff members receive sustainability training.

Action(s): Develop a plan for an employee sustainability training program, with input from the Equity and Outreach Focus Group and the Sustainability Coordinator. The plan should specify frequency of training, incentives for employees, the training materials to be used, and how training will be tracked. Receive approval from Human

EO2. EMPLOYEE SUSTAINABILITY TRAINING

- Location: City-wide
- NPV: \$40,000
- ROI: >100%
- Goal: Reduce electricity consumption for LGO 30% by 2040
- Contribution to Goal: 1%
- GHG Reduction: 16 MTCO2e
- Environmental Benefit: Reduced pollution associated with power generation, improve air quality
- Social Benefit: Increased sustainability awareness
- Lead Dept.: Sustainability
- Responsibility: Max Wemyss

Resources Director and City Manager, if needed. Set up multiple training events to reach all City employees. Track number of employees participating in sustainability projects. Create sustainability projects to raise internal awareness or competitions (recycling, litter pick up, beach cleanup) and offer rewards (shirts, gift card, extra casual dress day, extra half vacation day).

Cost(s)/Benefit(s): Training would be conducted by City staff. Additional costs include incentives, e.g., t-shirts, gift cards, etc., estimated at \$3,500/year). Feedback, education, and awareness campaigns have been shown to produce savings (e.g., on utility expenditures) of 0 to 10%. This measure assumes just 0.1% savings from greater employee awareness of the city's use of electricity, water, and fuel and their impact on expenses, the environment, and the community. Increased employee awareness of sustainability initiatives will promote better adherence to sustainability policies and increase employee engagement in sustainability programs. Other benefits include improved employee morale, team building and improved service to the public. If staff better understand programs, they will be able to communicate to residents more effectively.

Funding: This is a low-cost initiative that could be paid for out of the City's general fund. Staff time will be needed to complete this project.

Policy and Economics PE1. HYBRID WORK POLICY

Objective: Establish a hybrid work protocol to give eligible employees flexibility to continue to telework post-pandemic to achieve energy, resource, cost, and emissions savings, supporting the Climate Action and Multi-Modal Transportation goals, and reducing energy use in City office buildings by allowing

lighting and plug load demands to be reduced. This initiative will also provide better flexibility and work/life balance for employees.

Measure(s): Number of employees working remotely, electricity savings in kWh, GHG reductions in MTCO2e, and employee satisfaction with the policy as

measured through a survey.

Action(s): Develop and implement a hybrid work protocol for eligible employees. Create standards and procedures for hybrid work, including eligible roles, allowable number of days worked remotely vs. in the office, standards for home-work spaces, etc. Create guidelines for eligibility for employees to participate in the program. Track benefits including energy reductions from reduced facility electricity loads and reduction in Scope 3 emissions from employee commutes. Conduct a survey to determine employee satisfaction with the policy and solicit feedback for potential revisions to the policy, if warranted. Use Human Resources data to quantity the impact of the policy on employee retention and productivity, if feasible.

Cost(s)/Benefit(s): The development of the policy is expected to be low to no cost for the City. It is assumed

PE1. HYBRID WORK POLICY

- Location: City Hall
- NPV: \$148,000
- ROI: ∞
- Goal: reduce LGO GHG emissions
 45% below baseline by 2030
- Contribution to Goal: 19%
- GHG Reduction: 5,628 MTCO2e
- Environmental Benefit: Reduce
 GHG and criteria pollution
- Social Benefit: Improved employee satisfaction and work/life balance
- Lead Dept.: Human Resources / City Manager's Office

that the policy is developed and implemented using staff time under existing operating budgets. The policy, once implemented, is expected to provide reductions in energy and resources (i.e., office supplies and other materials). The monetary savings from energy is estimated, but resource savings are not quantified due to a lack of data. To calculate benefits, the percentage of employees working remotely (assumed 50%) is applied to energy use at the City Hall building, specifically a reduction in lighting and plug loads at the facility. In addition, GHG emissions reductions associated with employee commuting reduction were estimated, and the monetary value of reduced GHG emission was calculated using the average value of carbon credits the City might otherwise have to purchase to meet its net-zero climate goal. The policy will provide a reduction in Scope 3 emissions for the City as fewer commuting trips will be required. The policy is also expected to have a social benefit by increasing employee satisfaction and may have hiring, retention and productivity benefits which are not quantified due to lack of data.

Funding: The development and implementation of the policy is expected to be low or no cost.

PE2. SUSTAINABILITY DATA MANAGEMENT and REPORTING

Objective: Develop a data management solution for the sustainability program that supports reporting capability. As necessary to support data quality and insight into sustainability performance, submeter major process-related energy end uses, such as data centers or water utility facilities. Develop a communications plan for the sustainability program that identifies the audience, media, and messages for internal and external communications. Publish an internal sustainability program progress report by 2022. Publish an annual external sustainability report by 2030.

Measure(s): Achievement of objectives.

Action(s): Procure and utilize a customized data management solution to track the performance of the City's sustainability projects. This database or web-based tool should have a dashboard allowing the City's

PE2. SUSTAINABILITY DATA MANAGEMENT & REPORTING

- Location: City wide
- NPV: \$0
- ROI: 11%
- Goal: Reduce electricity consumption for LGO 15% by 2030
- Contribution to Goal: 1.3%
- GHG Reduction: 16 MTCO2e
- Environmental Benefit: Resource conservation (electricity, water, fuel) and reduced waste and pollution
- Social Benefit: Greater sustainability awareness
- Lead Dept.: Sustainability
- Responsibility: Max Wemvss

sustainability manager to track key. sustainability metrics, and the ability to generate reports summarizing metrics and analyzing trends. Develop a communications plan for Pompano Beach's sustainability program that includes identifying target audiences along with strategies and media to reach each audience. Conduct a survey for City employees to gauge sentiment about sustainability choices/programs, and to gather employee commuting data. Develop an internal progress report on the sustainability program and implementation of projects from the SPP by 2025. Track metrics from the SPP and develop report. Present report to City employees and management. After publication, refine the progress report into a template for an annual sustainability report that can be implemented by 2030 at the latest.

Cost(s)/Benefit(s): The custom sustainability data management solution will require hiring a consultant

Cost(s)/Benefit(s): The custom sustainability data management solution will require hiring a consultant to develop a database/software tool, with an estimated cost around \$65,000. The communications plan, sustainability progress report and annual external report are assumed to be no incremental cost initiatives requiring staff time. Benefits include improving the management and performance of the sustainability program and raising employee awareness and support of the sustainability program. Benefits of increased employee awareness are assumed to result in energy, fuel, and water savings for the City, conservatively estimated at 0.2% of annual expenditures. The annual report will increase the sustainability program's profile among the community and peers.

Funding: The database solution can be funded through a grant, if available, or through the City's operating budget. The communications plan, internal progress report and annual sustainability report will not require additional funding.

Supporting Initiatives:

SUSTAINABILITY REVOLVING FUND

This initiative would create a reoccurring and long-term mechanism for funding for sustainability projects, known as a Sustainability Revolving Fund (SRF). The SRF would leverage the cost savings realized from high ROI projects to help fund low ROI, but environmentally or socially impactful projects in the future. It would reduce the amount of funding needed from the City's General Fund for sustainability projects. Projects from all Departments in the City could contribute to the SRF, enabling cost sharing between Departments. The SRF should be established in 2023, or as soon as feasible, to help fund the other projects in the sustainability project portfolio. The power of the SRF is that once savings achieved by sustainability projects are repaid into the fund, that money can then be used to fund additional projects, which in turn lead to additional savings.

The process would include creating an SRF Management Committee that could consist of the Sustainability Coordinator, City Manager, Finance representative(s) and others. The Committee would create an accounting and financial procedures plan to specify how funds will be released from the SRF, and how the SRF balance will be replenished by receiving economic gains from sustainability projects. The Committee will create guidelines designating which projects qualify for funding through the SRF and how savings will be estimated. It will also define rules for tracking performance of funded projects (cost savings and measured energy consumption, payback period, energy audits etc.).

Once SRF rules are agreed, the City would provide seed money to start up the SRF. The City could apply for federal, state, local and private grants and/or allocate a portion of annual investment earnings for this purpose or request a one-time infusion of seed capital from the City Commission.

The SRF would accelerate the progress of the sustainability program and lead to triple bottom line benefits by enabling other sustainability projects to be funded. It may be necessary to educate members of City staff so that they become aware of the SRF program's existence and requirements.

6. IMPLEMENTATION PLAN

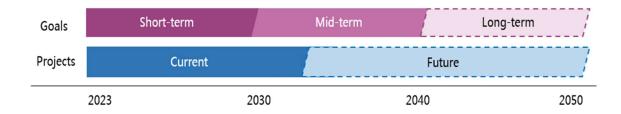
This Sustainability Project Portfolio contains a set of 17 projects in six focus areas to reduce the City of Pompano Beach's environmental footprint, while expanding services over the next five years. Together they have the potential to generate a net benefit of over \$3.2 million over a period of 10 years. The plan also includes several supporting initiatives that do not have cost/benefit analysis but that are recommendations which, would support the implementation of the portfolio.

The next step is to manage, budget, schedule and commit to realizing the projects. In some instances, the City may have to implement policy reforms to ensure that this SAP is a success. This section describes the implementation strategy for the SPP, including management, budget, schedule, and policy.

Implementation of projects will begin in 2024 with the aim of accomplishing the City's 2030 goals. As the City's sustainability program matures, new projects should be identified and implemented.

The overlapping timelines of the SPP's goals and projects are shown in **Figure 3**. Through their implementation in the SPP planning process, City employees have gained the skills necessary to develop additional sustainability projects and to continue to move the City of Pompano Beach towards its long-term goals,

FIGURE 3: SPP TIMELINE FOR GOALS AND PROJECTS



6.1 MANAGEMENT

Implementation of the SPP will be overseen by the City's Sustainability Coordinator. Each project in the SPP is associated with a detailed management strategy. These define the project objective, targets, strategies, actions, and schedules. The collective impacts on City resources and contribution towards goals have been estimated. Required investments have been projected, along with avoided costs, revenues, and measures of life-cycle economic performance. The lead City department/division and Project Manager have been preliminarily identified. Sustainability Project Report Cards containing this information are included in **Appendix A**.

Several of the included projects are designed to enable implementation of the SPP. Project PE2. Sustainability Data Management and Reporting calls for the City to develop a data management solution for the sustainability program that supports reporting capability. This solution would help the Sustainability Coordinator update and track critical data and key performance indicators (KPIs) to ensure project implementation is successful and projected benefits are realized. Project EO2 Employee Sustainability Training would increase awareness of the City's sustainability program and the SPP among City staff so that they can play a role in bringing it to life. This buy-in will be critical for implementing the SPP and will ensure traditional silos that inhibit teamwork are broken down and eliminated. The Sustainability Revolving Fund would also help with the implementation of the SPP by providing a source of funding for projects that otherwise might be delayed, as well as providing a strong foundation for funding future projects. Other supporting initiatives such as the Waste Minimization Plan and Sustainable Streets Masterplan would provide sustainability benefits to the community but need to be developed in more detail before implementation.

6.2 BUDGET

The estimated budget for implementation of the 17 projects included in the SPP is \$1.95 million over ten years. The first-year cost of the plan is about \$421,000, rising to \$1.15 million in Year 2, then slowly leveling off thereafter. Investment cost stabilizes at about \$110,000 from years 3-5 and then declines. This allows the total investment cost of the project portfolio to be spread out over the 10-year life of the portfolio. See Table 4 for details.

Not all projects require investment. Several of the projects in the portfolio are designed for implementation with no or low cost. This is accomplished by integrating sustainability into expenditures that are already planned, or by accomplishing the project using in-house effort. Other projects could likely be funded through grants.

TABLE 4: ANNUAL INVESTMENT COST OF THE SPP OVER 10 YEARS

ID	Project	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
CR1	City-owned Solar PV	\$15,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,015,000
CR2	Streamline Community Solar Permitting*	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$1,410,000
RC1	Energy Audits & Retro-commissioning	\$3,000	\$2,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,000
RC2	Update Sustainable Development Standards	\$125,000	\$0	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$165,000
RC3	Water Audits at Selected City Facilities	\$25,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,000
RC4	Optimize Use of Recreational Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MM1	Print and Paper Use Reduction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MM2	Sustainable Procurement Policy	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MM3	Waste Audits at City Facilities	\$10,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,000
PE1	Hybrid Work Policy	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PE2	Sustainability Data Management & Reporting	\$65,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$65,000
PE3	Sustainability Revolving Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
LT1	EV Fleet Transition	\$51,518	\$36,463	\$43,285	\$47,620	\$36,533	\$16,517	\$0	\$0	\$0	\$0	\$231,937
LT2	Propane Fleet Transition	\$49,400	\$35,226	\$36,071	\$36,937	\$37,823	\$0	\$0	\$0	\$0	\$0	\$195,457
LT3	Fleet Efficiency Upgrades	\$16,860	\$3,077	\$12,604	\$0	\$29,736	\$0	\$0	\$0	\$0	\$0	\$62,277
LT4	Optimize Fleet	\$25,580	\$16,394	\$12,604	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$54,578
EO1	Address Food Deserts	\$35,000	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$85,000
EO2	Employee Sustainability Training	\$0	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$31,500
	Total (City and Community)	\$562,358	\$1,287,660	\$254,064	\$234,057	\$253,593	\$166,017	\$149,500	\$149,500	\$149,500	\$149,500	\$3,355,749
	Total (City Only)	\$421,358	\$1,146,660	\$113,064	\$93,057	\$112,593	\$25,017	\$8,500	\$8,500	\$8,500	\$8,500	\$1,945,749
	Total (NPV ≥ 0)	\$402,358	\$1,237,660	\$249,064	\$229,057	\$248,593	\$161,017	\$144,500	\$144,500	\$144,500	\$144,500	\$3,105,749

^{*}Note: Implementation costs for CR2: Streamline Community Solar Permitting would be assumed by the community members who choose to install solar, and not by the City government.

6.3 METRICS AND REPORTING

Project PE2. Sustainability Data Management and Reporting will establish systems for gathering, tracking, and reporting on key project data. To support implementation, key performance indicators (or KPIs) must be established. Table 5 lists KPIs and their annual unit of measure. Some KPIs are relevant to multiple focus areas and projects. The City should track and internally report the KPIs annually as the SPP is implemented.

TABLE 5: KEY PERFORMANCE INDICATORS FOR SPP PROJECTS

Key Performance Indicator	Unit of Measure	Focus Area	Projects
Renewably Generated Electricity	kWh / Year	Climate and Resilience	CR1, CR2
Facility Energy Use Intensity	Kilowatt-hours / Square Foot / Year	Resource Conservation	RC1, RC4
Facility Energy Cost Intensity	Dollars / Square Foot / Year	Resource Conservation	RC1, RC4
Irrigation Water use	Gallons / Year	Resource Conservation	RC3
Irrigation Water Cost	Dollars / Year	Resource Conservation	RC4
% of Development Projects Meeting Green Building Criteria	Annual Number Meeting GBC / Total number of Projects per Year	Resource Conservation	RC2
Paper Consumption	Reams of Paper Used	Materials Management	MM1
Establishment of a Sustainable Purchasing Policy	Year Established	Materials Management	MM2
% Purchases Meeting Sustainable Purchasing Policy Criteria	Annual Number Meeting SPP / Total Number of Purchases per Year	Materials Management	MM2
% Expenditures Meeting Sust. Purchasing Policy Criteria	Annual Value of Purchases Meeting SPP / Total Value of Purchases per Year	Materials Management	MM2
Completion of Waste Audits	Year Completed	Materials Management	MM3
Diversion Rate	Tons Diverted / Total Tons of Waste	Materials Management	MM1, MM3
		Land Use and	
EV & Alt. Fueled Vehicles	Number of EV / Alt. Fueled Vehicles	Transportation	LT1, LT2, LT3
		Land Use and	
Alternative Fuel Use	Gasoline Gallons Equivalent (GGE)	Transportation	LT2, LT3, LT4
FM CL : C: ::	N. J. CEVICL : Co.	Land Use and	LT1 LT2
EV Charging Stations	Number of EV Charging Stations	Transportation	LT1, LT3
Food Deserts	% of population in low-income census tracts > 1 mile from a large supermarket	Equity and Outreach	E01
Local Food Access	Number of Food Pantries/Gardens/Markets Providing Access to healthy foods	Equity and Outreach	E01
Sustainability Training	Number of Employees Receiving Sustainability Training / Total Eligible Employees	Equity and Outreach	EO2
Scope 3 GHG Emissions from Employee Commuting	Metric tons of Carbon Dioxide equivalents (MTCO2e)	Policy and Economics	PE1
% of Employees Working Remotely	% of Employees working remotely 2 or more days per week	Policy and Economics	PE1
Development of Sustainability Data Management Solution	Year Developed	Policy and Economics	PE2
Development of a Sustainability Communications Plan	Year Developed	Policy and Economics	PE2
Publication of Internal Sustainability Report	Year Published	Policy and Economics	PE2
Publication of External Sustainability Report	Year Published	Policy and Economics	PE2

6.4 SCHEDULE

Table 6 depicts the schedule for implementation of SAP projects. It shows the years that costs would be incurred for each project as it is implemented. The relative intensity of investment in each year is shown by the value of the color: the darker the value the larger the investments.

TABLE 6: SPP INVESTMENT SCHEDULE

ID	Project	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
CR1	City-owned Solar PV	\$15,000	\$1,000,000								
CR2	Streamline Community Solar Permitting**										
RC1	Energy Audits and Retro-commissioning		\$2,000								
RC2	Update Sustainable Development Standards	\$125,000									
RC3	Water Audits at Selected City Facilities	\$25,000									
RC4	Optimize Use of Recreational Facilities										
MM1	Print and Paper Use Reduction										
MM2	Sustainable Procurement Policy										
MM3	Waste Audits at City Facilities	\$10,000									
PE1	Hybrid Work Policy										
PE2	Sustainability Data Management and Reporting	\$65,000									
LT1	EV Fleet Transition	\$51,518	\$36,463	\$43,285	\$47,620	\$36,533	\$16,517				
LT2	Propane Fleet Transition	\$49,400	\$35,226	\$36,071	\$36,937	\$37,823					
LT3	Fleet Efficiency Upgrades	\$16,860		\$12,604		\$29,736					
LT4	Optimize Fleet	\$25,580	\$16,394	\$12,604							
EO1	Address Food Deserts	\$35,000	\$50,000								
EO2	Employee Sustainability Training		\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500
	Total Estimated Annual Investment	\$421,358	\$1,146,660	\$113,064	\$93,057	\$112,593	\$25,017	\$8,500	\$8,500	\$8,500	\$8,500

^{*}Years in which investment is required are denoted in blue.

SPP projects that have no/low implementation cost and/or are policy measures requiring relatively little planning, development or procurement should be implemented as soon as it is feasible. These include CR2. Streamline Community Solar Permitting, RC1. Energy Audits, RC2. Update Green Building / Sustainable Development Standards, RC3. Water Audits at Selected City Facilities, RC4. Optimize Use of Recreational Facilities, MM1. Print and Paper Use Reduction, MM2. Sustainable Procurement Policy, MM3. Waste Audits at City Facilities, PE1. Hybrid Work Policy, and EO2. Employee Sustainability Training.

PE2. Sustainability Data Management and Reporting should also be implemented early on, since the data management system will be helpful for implementing and tracking the other projects in the SPP.

^{**}Community cost for community solar development is not included since this is not a cost to the City government.

Supporting initiatives should be implemented as soon as feasible. The Sustainability Revolving fund, if implemented early, could help fund other projects in the portfolio. The Waste Minimization plan and the Sustainable Streets Masterplan may take more time to implement.

6.5 BARRIERS AND FUNDING

Successful implementation of sustainability projects often requires overcoming internal and external barriers. These may stem from resistance to change; organizational protocols or operating procedures; conflicting interests and priorities; a lack of training, education, or awareness; insufficient funding, or regulatory obstacles. It is worth examining some of the barriers that could slow or hinder implementation of the SPP so that solutions to overcome them can be identified.

In general, the City of Pompano Beach and its employees are supportive of the sustainability program and committed to its success. Project EO2. Employee Sustainability Training will help spread awareness of the programs benefits internally and build support for the program and the SPP. Several of the SPP projects require behavior change and "doing things differently." These include MM1. Print and Paper Use, Reduction, MM2. Sustainable Procurement Policy, and PE1. Hybrid Work Policy. Demonstrated management support, employee training and outreach, and involving key parties in policy development can help overcome these barriers.

Externally, project RC2. Update Green Building / Sustainable Development Standards is the most likely to encounter barriers in the form of pushback from the development community. It is critical that building and zoning code revisions be developed with input from developers and other affected stakeholders and communicated transparently to overcome objections and arrive at code revisions that work for all.

The other substantial barrier that exists is funding. Projects with higher investment costs such as CR1 City-owned Solar PV, LT1 EV Fleet Transition, and LV2 Propane Fleet Transition could be delayed if funding is not secured. This barrier can be overcome by pointing out the strong business case for these projects and their contribution to the City's sustainability goals, and by investigating potential grant funding opportunities. Where applicable, potential grant funding opportunities are included in the Sustainability Project Report Cards in **Appendix A**.

6.6 ALIGNMENT

Implementing the SPP will be more effective if the portfolio and individual projects are aligned with other City programs, plans and priorities.

Pompano Beach's Comprehensive Plan already includes City's Sustainability Work Plan detailing the phases of the sustainability planning efforts, one of which is the SPP project. Pompano Beach also has a Strategic Plan which is updated every five years for policy changes and annually for projects. It is recommended that the City add the priority projects from the SPP (i.e., those that will begin implementation in Year 1 or Year 2) to

the annual update to the Strategic Plan at the earliest opportunity. This will help reinforce the high priority of the SPP projects and ensure they receive sufficient attention and resources for implementation.

Capital intensive building projects could also be included in the City's capital improvements program. Projects in this category include CR1. Cityowned Solar PV, LT1 EV Fleet Transition and LT2 Propane Fleet Transition. Project RC2. Update Green Building / Sustainable Development Standards may need to be timed to correspond with other expected updates to the City's municipal code and zoning code.

7. PUBLIC MEETING

The results of the SPP will be presented to the Pompano Beach City Commission at an advertised public hearing on June 14, 2022, beginning at 1:00 pm.

Ben Moore from RS&H, Inc. and Max Wemyss, the City's Sustainability Coordinator will present the project background and context, sustainability project portfolio, and projected triple-bottom line benefits to the City Commission and the public. They will also present the Implementation Plan for the SPP and discuss next steps for project implementation and the City's Sustainability Program. The presentation slides that will be used to present to the City Commission are included in **Appendix D: Commission Meeting.** The slides include the presentation agenda.

APPENDIX A: PROJECT REPORT CARDS

•		oility Plan Project Form, Detail: CR1	. City-c	wned So	olar PV									
L. Project Identification		con en la Langu												
		CR1. City-owned Solar PV								Climate & Resili	ence			
	Location	Airpark						Year	r Established	2024				
2. Project Description	b. Measures c. Action(s)	Objective: Reduce grid energy consumption through installation discussed potentially locating it in the Southwest corner of the Measure(s): Electricity output in kWh, percentage of Local Gove Action(s): Conduct a feasibility study to determine project detail vendor to construct the solar array. Track performance and ben delivery. Cost(s)/Benefit(s): Materials and installation cost is estimated at should be validated as part of a feasibility study once the site h. Using NREL's PVWatts Calculator, a 1 MW PV array located on provide about 462 MTCO2e GHG emissions abatement per year Funding: To be determined. Funding could potentially come from	Airpark propernment Oper ls such as solaefits. This me t \$1 per watt las been selec Airpark near t r, or 7.2% of t	erty near the Cit rations (LGO) de ar potential, sizi easure assumes based on typica ted. Benefits wo the City's water otal LGO emissi	y's Water Treati emand. ing, costs (capit the City will ow il ground moun ould include GH Treatment Plan ions. This would	ment Plant so elect al and O&M costs on and operate the ted solar prices of IG emissions redu it would receive al	ctricity generate s), potential bar e systems. Publ f \$0.89 to \$1.01 action, economi bout 5.80 kWh/	rriers such as g ic-private partr per watt , for a c benefits from m2 of solar rac	could serve tha lare hazard, and nership contracts an estimated tot a cheaper electri diation per day a	t facility. I if battery storacy s may be availab al procurement ocity, reduced air	ge should be ind le and should b cost of \$1 millio pollution, and p	cluded. Develop he evaluated as a n. Capital and C public relations/	an RFP. Secure fun an alternative form Operating and Main deducation and outr	nding. Select a of project Itenance costs each benefits.
. Responsible Party		Lead Department / Division		Engineer	ring / CIP									
		Project Manager		John Sfi	ropoulos									
l. Goals	5	Achieve		1,747,847	kWh	(or)	66%	renewahle d	enerav cunnly	for LGO by 2	2040			
Guais		Achieve		873,923		(or)			20 110	for LGO by 2				
	,	Base Year		2019					Carpiny	2, 200 2, 2				
		Base Value		2,648,253	kWh									
. Performance		Project Life			Years									
		Project Discount Rate Economic Performance		2.5%	Deturn on Inve	stmont (10 years)								
		ECONOMIC PERIORMANCE			Net Present Va	estment (10 years)								
		Goal Performance		90%	of 2040 Focus	Area Goal								
6. Implementation a. Costs				180%	of 2030 Focus	Area Goal								
	Responsibility	Task			Year 2			Year 5				Year 9	Year 10 Tot	
esign		Conduct a feasibility study to determine system size & location		(15,000)	(1,000,000)	-	0	0	0	0	0	0	0	(15,000
onstruction		Install 1 MW solar PV array		0	(1,000,000)	0	0	0	0	0	0	0	0	(1,000,000
				0	0	0	0	0	0	0	0	0	0	
			Total	(15,000)	(1,000,000)	0	0	0	0	0	0	0	0	(1,015,00
		Resource (Cost Rate:	\$0.1565	per kWh		Escal	lation Factor	2.40%	per year				
Benefits					Year 2	Year 3		Year 5			Year 8	Year 9	Year 10	
	Existing Resource Use	City operations baseline energy use (kWh)		2,648,253			2,648,253	2,648,253	2,648,253		2,648,253	2,648,253	2,648,253	26,482,53
		Percentage of baseline use offset by renewables		0.0%	59.4%	59.4%	59.4%	59.4%	59.4%	59.4%	59.4%	59.4%	59.4%	53.4
		Annual renewable energy generation offsetting utility use (kWh		0	1,572,758	1,572,758	1,572,758	1,572,758	1,572,758	1,572,758	1,572,758	1,572,758	1,572,758	14,154,83
		GHG emissions avoided from renewable energy substitution (M	ITCO2e)	0	462		462	462	462	462	462	462	462	4,10
Projected el	ectricity rate (\$ per kWh)	Escalated utility electric rate (inclusive of fees)		\$0.1565	\$0.1641	\$0.1680	\$0.1721	\$0.1762	\$0.1804	\$0.1848	\$0.1892	\$0.1937	\$0.1984 -	
Avoide	ed Expenditure / Revenue	Avoided utility electricity purchases due to renewable generation	on (USD)	\$0.0	\$258,000.0	\$264,000.0	\$271,000.0	\$277,000.0	\$284,000.0	\$291,000.0	\$298,000.0	\$305,000.0	\$312,000.0	\$2,560,000
						1								
		Net Bene	efit / (Cost)	(\$15,000)	(\$742,000)	\$264,000	\$271,000	\$277,000	\$284,000	\$291,000	\$298,000	\$305,000	\$312,000	\$1,545,00

City of Pompano Beach Sustainability Plan Project Form, Detail: CR2. Streamline Community Solar Permitting 1. Project Identification Project Name CR2. Streamline Community Solar Permitting Focus Area Climate & Resilience **Location** Community-wide Year Established 2024 Objective: Support increased solar PV deployment in the community, resulting in energy savings, GHG reduction and pollution prevention benefits, by reducing solar permitting fees and streamlining the solar permitting process. 2. Project Description Measure(s): Annual number and kW of solar installations deployed; renewable energy generated in kWh/year. Action(s): The City has already reduced solar photovoltaic permitting fees to a flat rate of \$260 for up to 10kW systems and \$260 plus \$10 per kW over 10 kW. The City has also earned SolSmart Gold certification for its solar permitting process. This measure proposes that the City maintain the expedited solar permitting process to reduce regulatory and scheduling barriers for community members who wish to install solar. As part of this measure, the City should seek to encourage solar development by conducting education and outreach to inform community members about the reduced fees and SolSmart certification. This could be achieved by featuring them on the City's website, holding informational events, radio announcements, etc. An expedited permitting process d. Cost(s) / Benefit(s) simplifies permitting requirements and shortens approval and inspection times through strategies such as simplifying documentation, allowing electronic submittals, and limiting the number of inspections. Academic research from California cities has shown , expedited permitting can increase solar deployment by as much as 22% (Hsu, J.H.-Y, 2018). This measure conservatively assumes a 5% annual increase in solar deployments as a result of the reduced fees and streamlined permitting. Cost(s)/Benefit(s): The City has already approved the ordinance reducing permit fees for solar installations and earned the SolSmart certification, so no further costs to the City are estimated. It is assumed that education and outreach to inform community members about the initiative can be done by City staff under existing operating budgets. The cost of installing the additional solar systems to the community members who choose to dop so would be \$1.41 milliuon over ten years. Benefits of increased solar deployment include electricity cost savings to community members who install solar, GHG emissions reductions, and pollution prevention benefits. Estimated dollar value of renewable energy produced by increased solar deployment as a result of the initiative would be about \$3.47 million over ten years at utility rates escalated for inflation. The value of this benefit would flow to the residents who installed solar, not to the City government. Increased solar deployment would result in environmental benefits such as reduced air and water pollution compared to fossil fuel generated electricity, and social benefits such as health benefits and job creation. Funding: No funding needed. 3. Responsible Party Lead Department / Division **Building Division** Project Manager Carpelo Jeoboam 4. Goals 40 Reduce community GHG emissions 1,032,656 (or) 75% *below 2019 baseline by 2040* 619,593 0 39 Reduce community GHG emissions 45% *below 2019 baseline by 2030* Base Year 2019 Base Value 1,376,874 5. Performance Project Life 25 Years Project Discount Rate 2.5% Economic Performance 146% Return on Investment \$1,628,000 Net Present Value (to community) Goal Performance 0.032% of 2040 Focus Area Goal 0.114% of 2030 Focus Area Goal 6. Implementation Responsibility Year 5 Year 7 Phase Task Year 6 Year 8 Staff Pass ordinance to reduce solar permitting fees (complete) Staff Develop & implement streamlined solar permitting process (complete) Cost to community members who install solar of additional projects due to streamlined permitting (141,259)(141,259)(141,259)(141,259) (141,259) (141,259)(141,259)(141,259) (141, 259)(141,259)(1.412.586) Other 0 Other Total (141.000)(141.000)(141.000)(141.000 (141.000) (141.000)(141.000) (141.000 (141.000)(141.000) (1.410.000)Resource Cost Rate: \$0.1565 per KWh **Escalation Factor** 2.40% per year b. Benefits Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 10 Existing Resource Use Amount of solar generation from projects currently permitted each year (kWh) 1,715,565 1,715,565 1,715,565 1,715,565 1,715,565 1,715,565 1,715,565 1,715,565 1,715,565 1,715,565 17,155,650 Percent Conserved Cumulative % increase in solar deployment due to permitting policies 5.0% 10.0% 15.0% 20.0% 25.0% 30.0% 35.0% 40.0% 45.0% 50.0% Resource Use Reduction Cumulative solar generation due to policies (kWh) 1,286,674 1,801,343 3,088,017 3,860,021 85,778 257,335 514,670 857,783 2,401,791 4,717,804 18,871,215 Avoided GHG Pollution Avoided GHG emissions (MTCO2e) 151 530 706 908 1,135 1,387 5,549 25 76 252 378 Baseline cost of permitted solar projects \$ 2,825,172 | \$ 2,825,172 | \$ 2,825,172 | \$ 2,825,172 | \$ 2,825,172 | \$ 2,825,172 \$ 2,825,172 \$ 2,825,172 \$ 2,825,172 | \$ 2,825,172 Resource Cost Projection Cost of utility (non-renewable) electricity \$0.156 \$0.160 \$0.164 \$0.168 \$0.172 \$0.176 \$0.180 \$0.185 \$0.189 \$0.194 \$317,398 \$570,542 \$730,294 \$914,003 Avoided Expenditure / Revenue Value to community of renewable energy generated (not included) \$13,424 \$41,239 \$84,457 \$144,140 \$221,399 \$433,355 \$3,470,252 Net Benefit / (Cost) (\$127,576) (\$99,761) (\$56,543) \$3,140 \$80,399 \$176,398 \$292,355 \$429,542 \$589,294 \$773,003 \$2,060,252

City of Pompar 1. Project Identificat		ility Plan Project Form, Detail:	RC1. Energy A	udits & Re	etro-com	mission	ing							
1. Project identificat		lame RC1. Energy Audits & Retro-commissioning							Focus Area	Resource Conser	vation			
	•		tor and Harb Chalaich Ca	mmunity Contor)				Voar	Established		vation			
	LUC	ation Selected City Buildings (Emma Lou Olson Civic Cer	iter and Herb Skoinick Co	mmunity Center)				Teal	ESTADIISTIEU	2024				
2. Project Description	n a. Obje b. Meas c. Acti d. Cost(s) / Bene e. Fun	conservation measures and construct / install thos techniques for opportunities to implement cost-eff (s) (Cost(s)/Benefit(s): Professional energy auditing services to conduct errors.	nergy audits of the followi e measures. Evaluate maj ective retrofits that reduc- vices are estimated at a nor or selected City buildings re estimated at \$0 on the ergy efficiency rebates tha	ng city buildings: E or building systems e energy consumpt nedian cost of \$0.16 by about 15% on a assumption that efi	mma Lou Olson is (HVAC, lighting ion. Apply best is per square foo verage at an avo ficiency upgrade	Civic Center and publication control c	nd Herb Skolnio omation, water oractices from t a typical range cost rate of \$0 year to comple	ck Community (heating and buthese audits to described of \$0.08-\$0.24 (1.1565 / kWh, prete. Second and	Center. Based o uilding envelope other City facilit per sf. Design ojected to incre I subsequent ye	n results of audite) using design ries. and constructionase by 2.4% on a	is, design cost-ei eviews, energy a n costs are estim everage based of	ffective recommoudits and/or retreated at \$0.33 per the CBO's Ecor	ended energy effici ro-commissioning (or saved kWh saved. nomic Projections fo	ency and (RCx) . Benefits are or 2018 - 2027
3. Responsible Party		Lead Department / Division Project Manager		Facilities Main George Buena										
4. Goals		8 Reduce electricity consumption for LGO		794,476 kW	/h	(or)	30%	<i>by 2040</i>						
i. Godis		7 Reduce electricity consumption for LGO		397,238 kW		(or)		by 2030						
		Base Year		2019				, , , , ,						
		Base Value		2,648,253 kW	/h									
5. Performance		Project Life		10 Ye	ars									
		Project Discount Rate		2.5%										
		Economic Performance		127% Re	turn on Investm	ent								
				\$5,000 Ne	t Present Value									
		Goal Performance			2040 Focus Area 2030 Focus Area									
6. Implementation <i>a. Costs</i>														
Phase	Responsibility	Task		Year 1 Ye	ar 2 Ye	ar 3 Y	ear 4 Y	/ear 5	Year 6	Year 7 Y	ear 8 Y	ear 9 Ye	ear 10 Total	
Staff	Facilities Division	Design Review		0	0	0	0	0	0	0	0	0	0	\$0
Other Staff	Energy Auditor Facilities Division	Prof. Svcs.: Energy Audits Design building retrofits		(3,339)	0	0	0	0	0	0	0	0	0	(\$3,339)
Staff	Facilities Division	Construct building retrofits		0	(2,354)	0	0	0	0	0	0	0	0	(2,354)
	·		Total	(\$3,000)	(\$2,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$5,000)
			Resource Cost Rate:	\$0.1565 pe		2		ation Factor	2.40%		, o v	0	10	
b. Benefits	Evicting Decourse	I Co Electricity consumption for celested facilities (IVIII	nor woor)		ear 2 Ye 47,562		ear 4 Y 47,562		Year 6 47,562		Year 8 Your 47,562		ear 10	47E C20
		e Use Electricity consumption for selected facilities (kWherved Percent savings as a result of energy audits / Rcx	per year)	47,562 0.0%	15.0%	47,562 15.0%	15.0%	47,562 15.0%	15.0%	47,562 15.0%	15.0%	47,562 15.0%	47,562 15.0% -	475,620
	reiteilt Collse	erved Tercent savings as a result of effergy addits / RCX		0.070	13.070	13.0%	13.0%	13.0%	13.0%	13.070	13.070	13.070	13.0/0 -	
	Resource Use Redu	iction Electricity use reduction in kWh		0	7,134	7,134	7,134	7,134	7,134	7,134	7,134	7,134	7,134	64,209
	Resource Cost Proje	ection Escalated electricity rate		\$0.156	\$0.160	\$0.164	\$0.168	\$0.172	\$0.176	\$0.180	\$0.185	\$0.189	\$0.194 -	
	Avoided Expenditure / Rev	renue Avoided electricity cost for the selected facilities		\$0	\$1,143	\$1,171	\$1,199	\$1,228	\$1,257	\$1,287	\$1,318	\$1,350	\$1,382 \$	11,335
			Not Bonefit (Co. 1)	(42.000)	(4057)	da a=a	41.100	#1 222	41.057	44 007	#4 240 l	¢1.250	¢1 202	AC 225
			Net Benefit / (Cost)	(\$3,000)	(\$857)	\$1,171	\$1,199	\$1,228	\$1,257	\$1,287	\$1,318	\$1,350	\$1,382	\$6,335

•	ompano Beach dentification	Sustainability Plan Project Form, Detail: R	C2. Update Sustaina	ble Devel	opment Sta	ndards						
i. Project it		ect Name RC2. Update Sustainable Development Standards				Focus	Area Resource Cons	envation				
	· · · · · · · · · · · · · · · · · · ·	Location				Year Establi		ervation				
		Location				rear Estabil.	2024					
2. Project D	a. (b. 1 c. d. Cost(s) / 1	Objective: Modify the City's existing Sustainable Development Stand accomplished (e.g., infill, ENERGY STAR, etc.) Revise point system to Measure(s): Improve commercial and multifamily energy performar Action(s): Establish an interdepartmental team composed of members standards, conduct stakeholder outreach to the development commercial and multifamily energy performar Action(s): Establish an interdepartmental team composed of members standards, conduct stakeholder outreach to the development standards to department(s) will be responsible for maintaining LEED credentials Cost(s)/Benefit(s): Costs include consulting services to develop a platemissions reductions, renewable energy generation, enhanced resil to uncertainty about the details of proposed revisions. Funding: The City should research grant funding options for this proposed.	o favor green building outcomes val nce by 10% and 15% relative to the F ership from Sustainability, City Mana nunity, recommend revisions to the A o new construction and major renov once projects are completed. an for revising the Sustainable Devel ience, and provision of EV charging	ued by the City, su Florida Building En ager's Office, Deve Zoning Code and u ations of local gov lopment Standard: infrastructure for	ich as energy efficiency ergy Code. Establish a elopment Services and update the Sustainable vernment facilities and s and Manual, and for new community buildi	y, water conservation dditional measures Public Works to rever Development Stan establish criteria for outreach to the Develops and governments	on, resilience, EV-read over time. view the current Sustai dards Manual. Obtain or when City facility provelopment community nt facilities built and re	y status, renewal inable Developm approval from ti ojects should pu v. Benefits would enovated under t	ble energy, and we nent Standards. Do he City Commissi rsue LEED certific I include energy, we the revised standa	vaste minimization verelop an RFP for ion and implementation. Establish of water and waste ards. Benefits are	n. r a consultant to eva nt the revised standa clear rules for which (disposal savings, ass	luate the ords. In addition, City ociated GHG
3. Responsil	ole Party	Lead Department / Division	Sustainability									
		Project Manager	Max Wemyss									
1. Goals		34 Ensure	- 0	(or)	30% <i>of n</i>	new construction	and major renova	ntions meets u	ıpdated Green	Building Prog	ıram standards b	y 2040
		33 Update the City's Green Building Program (Chapter 152		(or)								
		to include City-owned renovations, existing buildings ar infrastructure. Require certification at specified levels, a /or include minimum performance requirements			by .	2025						
		Base Year	2019									
		Base Value	-	0								
5. Performa	nce	Project Life	10 Voors									
o. r enoma	TICE	Project the Project Discount Rate	10 Years 2.5%									
		Economic Performance	-100% Return on Ir	nvestment								
			(\$156,000) Net Present	Value								
		Goal Performance	- of 2040 Foc									
: Impleme	atation		100% of 2025 Food	us Area Goal								
6. Implemer <i>a. Costs</i>	Ildli011											
hase	Responsibility	Task	Year 1 Year 2	Year 3	Year 4 Year	r 5 Year 6	Year 7	Year 8	Year 9	/ear 10 T	otal	
Staff	TBD	Issue an RFP and procure a study on GBP / SDS	(125,000)	0 0		0	0 0	0	0	0	<u> </u>	(125,000)
taff	TBD	Implement updated GBP/SDS	0	0 0	<u> </u>	0	0 0	0	-	0		0
taff	TBD	Track and report annually on number of compliant projects after 20		0 (5,000)			5,000) (5,000)	(5,000)	(5,000)	(5,000)		(40,000)
			Total (125,000)	0 (5,000)	(5,000)	(5,000)	(5,000) (5,000)	(5,000)	(5,000)	(5,000)		(170,000)
		Resource Conservation V	/alue: \$0.156 per kWh		Escalatio	n Factor	2.40% per year					
o. Benefits			Year 1 Year 2	Year 3	Year 4 Year	r 5 Year 6	Year 7	Year 8	Year 9	/ear 10 T	otal	
	Resource Use F	Reduction Electricity use reduction	0	0 0		0	0 0	0	0	0		0
		Cost Rate Projected average rate (electricity and maintenance)	\$0.1565 \$0.16	503 \$0.1641	\$0.1680	\$0.1721 \$0	0.1762 \$0.1804	\$0.1848	\$0.1892	\$0.1937		
	A I.E			1.								
	Avoided Expenditure /	Revenue Avoided electricity expenditures (\$)	\$ - \$ -	-	\$ - \$	- \$	- \$ -	-	\$ -	\$ -		0
		Net Benefit /	(Cost) (\$125,000)	\$0 (\$5,000)	(\$5,000)	(\$5,000) (\$	5,000) (\$5,000)	(\$5,000)	(\$5,000)	(\$5,000)		-165,000

 Project Identificatio 	n											
	Project Name RC3. Water Audits at Selected City Facilities						Focus Area Res	source Conserva	ation			
	Selected high irrigation usage accounts: Aquatics Pool Bldg (2 Location Marina West (26856), City Hall, Commission Bldg. (57254)	1598), Fire Station 61 (4114), Pom	npano Beach Pa	ark (42662), Hill:	sboro Inlet	Year I	Established 202	24				
Project Description	a. Objective: Conserve water by increasing the efficiency of city i Hillsboro Inlet Marina West (26856), City Hall, Commission Blaconverting sprinklers to drip irrigation, using more efficient sp. Measure(s): Gallons of water used for irrigation in targeted ac Action(s): Conduct irrigation audits to determine opportunities systems are operating as efficiently as possible. Cost(s)/Benefit(s): Implementation costs are estimated at \$5,0 based on the CBO's Economic Projections for 2018 - 2027 for receives a rebate from Broward County's water conservation project could likely be funded out of operating likely as possible.	lg. (57254). Target savings of 209 rinkler heads, using weather and counts is for water conservation. Procure 00 installed, per system on average the Consumer Price Index. Project program, which reimburses one him.	% of water use /or sensor-base and install wat ge. Benefits are t assumes irriga	in accounts assived irrigation con er-efficient equipped based on avoication audits and	ociated with irrightrols, and proping proping to replace the water charged upgrades are controls.	gation relative serly maintaining equive existing equives, estimated as completed in ye	to the 2019 baseling irrigation system To present for the select \$10.60 per thous	ine potable watens. lected irrigation sand gallons (kg	er usage. Stra systems. Perl gal) saved. Va	tegies recommeno form ongoing mai lues are projected	ntenance to ensure	could include irrigation on average
Decree Mile Deal												
Responsible Party	Lead Department / Division	Water Conse										
	Project Manager	Molly Fisc	her									
l. Goals	11 Reduce potable water use	65,221,200 Ga	llons	(or)	27%	by 2040						
. Godis	10 Reduce potable water use	31,402,800 Ga		(or)		by 2030						
	Base Year	2019		(51)	== 77	y 2030						
	Base Value	241,560,000 Ga	llons									
	base value	211,300,000 00	110113									
. Performance	Project Life	10 Yea	ars									
	Project Discount Rate	2.5%										
	Economic Performance	570% Ref	turn on Investn	nent								
		\$120,000 Ne	t Present Value	9								
	Goal Performance	5.0% of 3	2040 Focus Are	ea Goal								
		2.4% of 2	2030 Focus Are	ea Goal								
. Implementation												
. Costs												
	Responsibility Task										ear 10 Total	/f12.F0
ther onstruction	Conduct Irrigation Water Audits (5 accounts) Install new irrigation equipment and controls	(\$12,500) (25,000)	\$0 0	\$0 0	\$0 0	\$0 0	\$0 0	\$0 0	\$0 0	\$0 0	\$0 0	(\$12,50) (\$25,00)
ther	Broward County Irrigation Audit Program cost rebate	12,500	0	0	0	0	0	0	0	0	0	\$12,50
		<i>Total</i> (\$25,000)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$25,00
	Resource	Cost Rate: \$0.0106 pe	r gallon		Escala	tion Factor	2.40% pei	r vear				
		400200 po	. 94				2.1070 βο	, you.				
. Benefits		Year 1 Ye	ar 2 Ye	ear 3 Yo	ear 4 Yo	ear 5 Y	'ear 6 Ye	ar 7 Ye	ear 8	Year 9 Ye	ear 10	
	Existing Resource Use 1000 gallons (kgal) per year	7,785	7,785	7,785	7,785	7,785	7,785	7,785	7,785	7,785	7,785	77,8
	Percent Conserved % resource to be conserved vs. baseline	0.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0% -	
	Resource Use Reduction Water use reduction (kgal)	0	1,557	1,557	1,557	1,557	1,557	1,557	1,557	1,557	1,557	14,0
	Resource Cost Projection Projected Water Rate (\$ per kgal)	\$10.60	\$10.85	\$11.11	\$11.38	\$11.65	\$11.93	\$12.22	\$12.51	\$12.81	\$13.12 -	
A.,-!-!	ad Evpanditura / Payanua Ayaidad water ayaanditures (\$)	40	¢10,000	¢17.200	¢17 701	¢10.1.47	¢10.500	¢10.020	¢10.405	¢10.053	¢20.421	#1C7 F
Avoid	ed Expenditure / Revenue Avoided water expenditures (\$)	\$0	\$16,900	\$17,306	\$17,721	\$18,147	\$18,582	\$19,028	\$19,485	\$19,952	\$20,431	\$167,5

1. Project Ide		RC4. Optimize Use of Recreational Facilities							Focus Area	Docourse C	anyatic =			
		7 Selected Recreational Facilities: Charlotte Burrie, E. Pat Lark	vins Highlands	Park Mitchell M	oore, and McNair	r		Veal	rocus Area r Established		ervation			
	Location	7 Selected Necreational Facilities. Charlotte burne, L. Fat Lair	ans, mgmanas	i dik, iviitciieli ivi	oore, and wichan			rcar	LStabilstica	2024				
?. Project Des	scription a. Objectiv. b. Measure. c. Action(s d. Cost(s) / Benefit(s e Funding	Overall, hours are reduced while better matching commun Measure(s): Electricity use in kWh, labor cost savings Action(s): City staff developed a list of facilities to include in savings benefits based on reduced lighting and plug loads	or other activities ity needs. In the project; desunder the new pout the change ring minimal sta	etermined currer operating hours and their asso aff time to imple	ilities are underut nt operating hour . Project impleme ciated sustainabil ment. Benefits in	s and energy entation would lity benefits. clude energy s	uced, while addit usage of the faci d consist of imple savings from red	tional hours wh ilities; and deve ementing the o	en there is comn loped proposed, ptimized schedu	nunity demand optimized oper les, including a	are added, for rating hours. Th djusting mecha	instance on Sund his information w anical and lighting	days at some lo ras used to esting g system sched	mate ener ules, and
Docnoncibl	lo Party	Land Danartment / Division		Double	nd Dee									
. Responsibl	ie raity	Lead Department / Division Project Manager		Parks a										
		Troject Manager		Kaitly	I NCII									
. Goals		8 Reduce electricity consumption for LGO		794,476	kWh	(or)	30%	<i>by 2040</i>						
		7 Reduce electricity consumption for LGO		397,238	kWh	(or)	15%	<i>by 2030</i>						
		Base Year		2019										
		Base Value		2,648,253	kWh									
. Performan	CP	Project Life		10	Years									
. i Ciloiillain	CC	Project Discount Rate		2.5%	Tears									
		Economic Performance			Return on Invest	ment								
i. Implement	tation	Goal Performance		1.9%	Net Present Valu of 2040 Focus Ar of 2030 Focus Ar	ea Goal								
a. Costs	tation													
hase	Responsibility	Task		Year 1	Year 2 Y	'ear 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
aff	Parks and Rec	Implement Proposed Changes to Operating Hours	0.1 (*)	0	0	0	0	0		0	0		0	
aff	Parks and Rec	Conduct education/outreach to community about changes	& Denetits	0	0	0	0	0	0	U	0	U	0	
			Total	0	0	0	0	0	0	0	0	0		
		Resource Conserv			per kWh	Ü		lation Factor		per year	0	0	0	
				V 1		, ,	V 4	V - F	V C		V 0	V 0	v 10	T . I
Danafita	Evicting Decourse Us	e Electricity Consumption in Selected Facilities (kWh)		Year 1 156,777	Year 2 Y	'ear 3 156,777		Year 5 156,777	Year 6 156,777	Year 7 156,777	Year 8 156,777		Year 10 156,777	Total 1,567,
Benefits		2.22 Consumption in Selected Facilities (KVIII)		22.2%	22.2%	22.2%		22.2%		22.2%	22.2%		22.2%	23
Benefits		n Operating hours reduction percentage								14,971				
Benefits	Resource Use Reductio	Operating hours reduction percentage Avoided Electricity Consumption (kWh)		14,971	14,971	14,971	14,971	14,971	11,371	14,9/1	14,971	14,971	14,971	149
Benefits	Resource Use Reductio Resource Use Reductio	· · · · · · · · · · · · · · · · · · ·			14,971 \$0.1603	\$0.1641	\$0.1680	\$0.1721		\$0.1804	\$0.1848		\$0.1937	
	Resource Use Reductio Resource Use Reductio Resource Cost Rat	Avoided Electricity Consumption (kWh) Escalated Electricity Rate (USD/kWh)		14,971 \$0.1565	\$0.1603	\$0.1641	\$0.1680	\$0.1721	\$0.1762	\$0.1804	\$0.1848	\$0.1892	\$0.1937	-
A	Resource Use Reductio Resource Use Reductio Resource Cost Rat Avoided Expenditure / Revenu	n Avoided Electricity Consumption (kWh) e Escalated Electricity Rate (USD/kWh) e Electricity Savings Per Year (USD)		14,971 \$0.1565 \$2,343	\$0.1603	\$0.1641 \$2,457	\$0.1680 \$2,516	\$0.1721 \$2,576	\$0.1762 \$2,638	\$0.1804 \$2,701	\$0.1848 \$2,766	\$ \$0.1892 5 \$2,832	\$0.1937 \$2,900	- 26
A A	Resource Use Reductio Resource Use Reductio Resource Cost Rat Avoided Expenditure / Revenu Avoided Expenditure / Revenu	n Avoided Electricity Consumption (kWh) e Escalated Electricity Rate (USD/kWh) e Electricity Savings Per Year (USD) e Labor Savings Per Year (USD)		\$0.1565 \$2,343 \$137,046	\$0.1603 \$2,399 \$137,046	\$0.1641 \$2,457 \$137,046	\$0.1680 \$2,516 \$137,046	\$0.1721 \$2,576 \$137,046	\$0.1762 \$2,638 \$137,046	\$0.1804 \$2,701 \$137,046	\$0.1848 \$2,766 \$137,046	\$ \$0.1892 \$ \$2,832 \$ \$137,046	\$0.1937 \$2,900 \$137,046	26, \$1,370,4
A A	Resource Use Reductio Resource Use Reductio Resource Cost Rat Avoided Expenditure / Revenu Avoided Expenditure / Revenu	n Avoided Electricity Consumption (kWh) e Escalated Electricity Rate (USD/kWh) e Electricity Savings Per Year (USD)		14,971 \$0.1565 \$2,343	\$0.1603	\$0.1641 \$2,457	\$0.1680 \$2,516	\$0.1721 \$2,576	\$0.1762 \$2,638	\$0.1804 \$2,701	\$0.1848 \$2,766	\$ \$0.1892 \$ \$2,832 \$ \$137,046	\$0.1937 \$2,900	- 26 \$1,370,
A A	Resource Use Reductio Resource Use Reductio Resource Cost Rat Avoided Expenditure / Revenu Avoided Expenditure / Revenu	Avoided Electricity Consumption (kWh) Escalated Electricity Rate (USD/kWh) Electricity Savings Per Year (USD) Labor Savings Per Year (USD) Combined Electricity and Labor Savings Per Year (USD)	nefit / (Cost)	14,971 \$0.1565 \$2,343 \$137,046 \$139,389	\$0.1603 \$2,399 \$137,046	\$0.1641 \$2,457 \$137,046	\$0.1680 \$2,516 \$137,046	\$0.1721 \$2,576 \$137,046	\$0.1762 \$2,638 \$137,046	\$0.1804 \$2,701 \$137,046	\$0.1848 \$2,766 \$137,046	\$ \$0.1892 \$ \$2,832 \$ \$137,046 \$ \$139,878	\$0.1937 \$2,900 \$137,046	- \$1,370, \$1,396

		stainability Plan Project Form, D	etail: MM1.	Print and	Paper U	se Reduc	tion							
1. Project To		ame MM1. Print and Paper Use Reduction							Fagus Araa 14					
		tion City Facilities - All Departments							Focus Area M. Established 20	_	gement			
2. Project De	a. Objec b. Meas c. Actio	justification for purchasing new printers. Track paper to ensure compliance with the policy. (fit(s) Cost(s)/Benefit(s): No costs are assumed for this projection.	ssociated cost savings in the City. Develop and reduction as the policity. Staff time will be n	n USD. implement a pap y is implemented eeded to draft th	perless office po . The measure to be paperless offi	licy. Incorporate e targets a 5% decre	existing progra ease in paper it out to City	ams such as trar use per year as departments. Be	isitioning to pap the policy is implined	lemented and e costs saving	enforced. Internates from avoided u	al education an	d outreach effor	rts are needed nk/toner, and
3. Responsik	ole Party	Lead Department / Division Project Manager		Sustaina Max Wei										
4. Goals		20 Achieve a 19 Develop a policy to reduce the use of paper Base Year Base Value	in City operation by	v substituting (2019 5,346 LI		ernatives		reduction in p by 2025	aper use by 20	040				
5. Performa	nce	Project Life Project Discount Rate Economic Performance Goal Performance		\$115,000 N 111.1% O	ears eturn on Investr et Present Valu f 2040 Focus Ard f 2025 Focus Ard	e ea Goal								
6. Implemer	ntation					ted. This project e.	stablishes a pi	rogram that will	be designed to	reach the asso	ciated goal.			
Phase	Responsibility	Task	•	Year 1 Y	ear 2 Y	ear 3 Ye	ar 4 Y	/ear 5 Y	ear 6 Ye	ear 7	Year 8 Yo	ear 9 Y	ear 10 T	otal
Staff		Develop a baseline for annual paper use in the City		0	0	0	0	0	0	0	0	0	0	0
Staff		Draft paperless office policy		0	0	0	0	0	0	0	0	0	0	0
Staff		Disseminate policy to departments and educate staff		0	0	0	0	0	0	0	0	0	0	0
Staff		Conduct internal education & outreach about the po	licy <i>Total</i>	0	0	0	0	0	0	0	0	0	0	0
b. Benefits		Re	source Cost Rate:		er ream	'ear 3 Ye.		ation Factor	2.40% ear 6 Ye	ear 7	Year 8 Yo	ear 9 Y	/ear 10 T	otal
	Existing Resource	Use Number of reams of paper used (each ream = 500 pa		5,346	5,346	5,346	5,346	5,346	5,346	5,346	5,346	5,346	5,346	53,460
		rved % Paper Use Eliminated		5%	10%	15%	20%	25%	30%	35%	40%	45%	50% -	
			-											
		ided Avoided paper waste disposal in tons		0.7	1.3	2.0	2.7	3.3	4.0	4.7	5.3	6.0	6.7	37
		Cost Paper Cost (per ream) escalated over ten years		\$8.04	\$8.23	\$8.43	\$8.63	\$8.84	\$9.05	\$9.27	\$9.49	\$9.72	\$9.95 -	4400
	Avoided Expenditure / Reve	enue Cost savings from paperless initiative		\$2,149.1	\$4,401.3	\$6,760.5	\$9,230.3	\$11,814.8	\$14,518.0	\$17,344.1	\$20,297.6	\$23,382.8	\$26,604.5	\$136,503.0
		N	let Benefit / (Cost)	\$2,149	\$4,401	\$6,760	\$9,230	\$11,815	\$14,518	\$17,344	\$20,298	\$23,383	\$26,604	\$136,503

	Project Name	MM2. Sustainable Procurement Policy			Fo	cus Area Materials M	anagement		
		7 City Hall				tablished 2024	unagement		
2. Project Descrip	otion a. Objective b. Measure: c. Action(s, d. Cost(s) / Benefit(s, e. Funding	Action(s): Comprehensively track purchases of consumables, durable good Action(s): Create a staff team to draft the sustainable purchasing policy. Gracy meet standards such as Green Seal or Environmental Choice. The policy wou Preference should be given to products that are purchased in bulk or have re-	as a catalyst for entrepreneursh ls and cleaning products by cost dually increase its scope over tin ld require purchases to meet va educed packaging or recyclable e Purchasing Policy criteria and aterials are typically similar to le could have an exception for purch or green products and services is ENERGY STAR electronics are ty evices each year. Energy saving:	ip. Minimize the use of no s that meet criteria estable, beginning with electro rious sustainability criteria packaging to reduce wast report results annually. The ss sustainable (i.e., conventhases that would result in expanding which will like pically available at no incress are estimated at an aver	on-essential materials and practi ished under this program and co nic equipment with the ENERGY a. Criteria would require product e. Once implemented, the City we he program could be gradually of ntional) purchases. For some pro n a significant incremental cost. T ely bring down costs over time. For remental cost, and replacement age of 28% using the Savings Ca	ces. STAR label, office supps to be energy efficient, will need to educate purexpanded to include RFI oducts, environmentally the key is to make the seearch will have to be of legacy models is assulculator for ENERGY ST	es in those categories. lies with recycled conten water efficient, recyclab chasers about the policy and procurement fron preferable purchases mustainable purchase the done to identify replace uned to happen over tim AR Qualified Office Equi	t, and cleaning products an le, fair trade, and/or socially and its benefits. The City sh n contractors working on be ay be more expensive than default option and give req ment products that provide he without incremental cost. oment. After 5 years, all dev	d materials the responsible. could half of the City conventional uire the similar Electricity rices are
. Responsible Pa	arty	Lead Department / Division Project Manager	Procurement Carla Byrd						
l. Goals		7 Reduce electricity consumption for LGO 8 Reduce electricity consumption for LGO Base Year Base Value	397,238 kWh 794,476 kWh 2019 2,648,253 kWh	(or)	15% by 2030 30% by 2040				
5. Performance		Project Life Project Discount Rate Economic Performance Goal Performance	10 Years 2.5% ∞ Return on II \$27,000 Net Present 2.8% of 2040 Foc 5.7% of 2030 Foc	Value us Area Goal					
5. Implementation. <i>Costs</i>									
	Responsibility IBD	Task Develop Sustainable Purchasing Policy (staff time)	Year 1 Year 2	Year 3 Ye	ar 4 Year 5 Yea	or 6 Year 7	Year 8 Year 0 0	7	otal
taff	ГВD	Education, outreach for City Staff and rollout of Sustainable Purchasing Police	y 0	0 0	0 0	0	0 0	0 0	
taff [TBD	Replace electronics with ENERGY STAR electronics To ENERGY STAR Savings Percentage Resource Cost Rat		0 0 0	0 0 0 0 CESCALATION FACTOR	2.40%	0 0	0 0 0	
b. Benefits			Year 1 Year 2	Year 3 Ye	ar 4 Year 5 Yea	ur 6 Year 7	Year 8 Year	r 9 Year 10 T	otal
	Existing Resource Cost	City Hall electricity use for legacy electronics Baseline annual electricity cost for legacy (non ENERGY STAR) electronics 'Megacy electronics replaced with ENERGY STAR Electronics Avoided electricity use from ENERGY STAR equip. (kWh)	\$ 12,573 \$ 1. 0% 0	0,338 80,338 2,874 \$ 13,183 \$ 33% 66% 7,423 14,846	80,338 80,338 13,500 \$ 13,824 \$ 99% 100% 22,270 22,495	100% 10 22,495 22,4	95 \$ 14,843 \$ 0% 100% 95 22,495	80,338 80,338 15,199 15,564 100% 100% 22,495 22,495	803,3 \$ 140,2 179,5
Av	oided Expenditure / Revenue	Projected electric rate (\$/kWh) Avoided electricity expenditure from ENERGY STAR equip.		0.160 \$ 0.164 \$ 1,190 \$ 2,436 \$	0.168 \$ 0.172 3,742 \$ 3,871		80 \$ 0.185 \$ 59 \$ 4,156 \$	0.189 \$ 0.194 4,256 \$ 4,358	\$ 32,0

City of Pompano Beach Susta 1. Project Identification	inability Plan Project Form, Detail: MM3.	Waste Audits at City Facilities		
	MM3. Waste Audits at City Facilities		Focus Area Materials Management	
Location	Selected Facilities		Year Established 2024	
2. Project Description a. Objective b. Measures c. Action(s) d. Cost(s) / Benefit(s) f. Funding f. Funding	sort results. Negotiate recycling revenue in contracts as they are renewed. Measure(s): Waste reduction and increased recycling, in tons. Action(s): Procure / award a task order to perform a waste audit of selected. The waste audit would involve removing materials from dumpsters, sorting enhancing performance, as applicable. Review Waste disposal/recycling completes, Cost(s)/Benefit(s): For the purposes of this concept, costs are estimated at budgets. Benefits will include a better understanding of the City's waste standard information to quantify benefits in greater detail. For the purposes of this recycled, and Waste Management (WM) is projecting an average blended waste disposal contract, the City does not pay for waste picked up from its	d representative City facilities. For the purposes of this project of g and weighing the material, analyzing finds, and issuing a repontracts as they come up for renewal. As feasible, renegotiate co \$10,000 for a single-day waste audit (\$5,000 per location). Stafferam and identification of potential opportunities for cost redurmeasure, it is assumed that these efforts result in a 2.5% per yealue for recyclables of \$125 per ton in 2022. This would transless accordingly the separately as these costs are bundled into the communitied by volumes quantified by the waste audit or if needs are vation of resources, and greater awareness among City employed.	isposal costs, reduce greenhouse gas emissions, and increase recycling revenues. Investigation of the City would conduct waste audits at two locations: City Hall and a communifort. Based on the results of the audit, evaluate efficacy of current recycling program are ontracts to include revenue from recyclable commodities identified through the waste if time will be required to review and renegotiate contracts, but these costs are assumentions from right-sizing waste infrastructure, and/or receiving recycling revenue. Once ear increase in recycling. Recycling revenue potential is conservatively estimated at \$10 ate to \$29.50 per ton of MSW in potential recyclable value. The City's existing contract unity-wide contract. As a result, cost savings from reduced infrastructure are not estimal reduced due to waste diversion. The current contract does not provide recycling reverses and the public.	ity center or other location that serves the public. d waste contracts. Develop recommendations for audit d to be covered within the City's existing operating completed, the waste sort will provide the necessary per ton. In the US, approximately 24% of MSW is with WM expires in 2022. Under the City's existing ated. Restructuring the contract could make it
3. Responsible Party	Lead Department / Division Project Manager	Solid Waste Services Beth Dubow		
	Achieve a 6 Achieve a Base Year Base Value		LGO & Community waste diversion rate by 2040 LGO & Community waste diversion rate by 2030	
5. Performance	Project Life Project Discount Rate Economic Performance Goal Performance	10 Years 2.5% 29% Return on Investment \$10,000 Net Present Value 146% of 2040 Focus Area Goal 46% of 2030 Focus Area Goal		
6. Implementation a. Costs				
Phase Responsibility	Task Procure Waste Audit	Year 1 Year 2 Year 3 Year 4 (10,000) 0 0 0 0	Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 0 0 0 0 0 0	0 Total (10,000)
	Review waste disposal contracts	0 0 0 0	0 0 0 0 0	0 0
	Renegotiate contracts to reduce infrastructure & include recycling revenu *Total*		0 0 0 0 0	0 0 (10,000)
b. Benefits	Resource Cost Rate: Recycling Revenue rate	\$ - per ton Escal \$10.00 per ton Year 1 Year 2 Year 3 Year 4	lation Factor 2.40% Year 5 Year 6 Year 7 Year 8 Year 9 Year 10) Total
Tons material recycled Tons of garbage sent to landfil		167 164 187 209 935 771 748 726	232 254 277 299 321 703 681 658 636 613	344 2,454 591 7,062
Projected solid waste cost avoidance		0 0 0 0	0 0 0 0 0	0 0
Projected recycling revenue		0% \$ 1,643.44 \$ 1,867.81 \$ 2,092.19		
d annual disposal costs and recycling revenue		\$0 \$1,643 \$1,868 \$2,092 \$30	\$2,317	22,868
	Net Benefit / (Cost)	(\$10,000) \$1,643 \$1,868 \$2,092	\$2,317 \$2,541 \$2,765 \$2,990 \$3,214 \$	3,438 \$12,868

•	•	Sustainability Plan Project Forn	Detail: LT1. EV Fleet Transition
1. Project Id		Marca IT1 EV Floot Transition	
		Name LT1. EV Fleet Transition	Focus Area Land Use & Transportation
	LC	Not Applicable	Year Established 2024
2. Project De	a. Obj b. Me c. Ac d. Cost(s) / Ber	b. Measure(s): Number of vehicles transitioned c. Action(s): Identify vehicles for replacement exprocure the vehicle via purchase or lease. Procure the vehicle via purchase or lease. Procure the vehicle via purchase or lease. Procure and EVSE. d. Cost(s) / Benefit(s): Costs assume the increm vs. a Ford Transit, resulting in an average incre an installed cost of \$2,300 per station. Training be a 68% reduction, based on data published by year project life.	over year. Avoided gasoline-fueled internal combustion engines (ICE) and travelling more than about 8,000 miles per year to Electric Vehicles (EVs) at the end of their useful life. The per year is a specific to the project assumes that vehicles are purchased using general fund resources or leased. The project assumes that vehicles are purchased using general fund resources or leased.
3. Responsib	le Party	Lead Department / Division Project Manager	Fleet Forrest Hall
4. Goals		28 Transition	209 (or) 66% of City's fleet vehicles to non-fossil fuel sources or electricity by 2040
		24 Transition	104 (or) 33% of City's fleet vehicles to non-fossil fuel sources or electricity by 2030
		Base Velice	2019
		Base Value	
5. Performan	ice	Project Life Project Discount Rate Economic Performance	10 Years 2.5%
		ECONOMIC PENOIMANCE	### 116% Return on Investment \$214,000 Net Present Value
		Goal Performance	13% of 2040 Focus Area Goal 27% of 2030 Focus Area Goal
6. Implement a. Costs	tation		
Phase	Responsibility	Task	Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total
cquisition cquisition	Fleet Director Fleet Director	Replace existing vehicles with EV equivalent Procure Level 2 EVSE, Dual Port	(30,768) (30,575) (37,256) (41,446) (30,211) (12,633) 0 0 0 0 0 (182,889) (5,750) (5,888) (6,029) (6,174) (6,322) (3,884) 0 0 0 0 0 (34,048)
aff	Fleet Director	Vocational Training for EV maintenance	(15,000) 0 0 0 0 0 0 0 0 0 (15,000
			Total (51,518) (36,463) (43,285) (47,620) (36,533) (16,517) 0 0 0 0 (231,937)
			Resource Cost Rate: \$4 \$/gasoline gallon equivalent Escalation Factor 2.40%
. Benefits			Acsource Cost Nate. 34 3/gasonne ganon equivalent Escalation Lactor 2.4070
			Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total
		rce Use Gasoline Gallon Equivalents (GGE)	339,854 339,85
D	Existing Resource rojected Avoided Resour		\$ 1,359,417 \$ 1,392,043 \$ 1,425,452 \$ 1,459,663 \$ 1,494,695 \$ 1,530,568 \$ 1,567,301 \$ 1,604,917 \$ 1,643,435 \$ 1,682,877 \$ 15,160,36 \$ - 9,085 \$ 10,778 \$ 12,530 \$ 13,905 \$ 15,474 \$ 15,916 \$ 15,916 \$ 15,916 \$ 15,916 \$ 15,916 \$ 125,43
	Percent Avoided Resour		\$ - 9,085 10,778 12,530 13,905 15,474 13,916 13,916 15,916 15,916 15,916 125,43 0% 3% 3% 4% 4% 5% 5% 5% 5% 5%
	Avoided Expenditure / Re		\$0 \$36,340 \$43,113 \$50,122 \$55,621 \$61,895 \$63,664 \$63,664 \$63,664 \$63,664 \$63,664
			Net Benefit / (Cost) (\$51,518) (\$123) (\$172) \$2,501 \$19,088 \$45,378 \$63,664 \$63,664 \$63,664 \$63,664 \$269,810

	ompano Beach Sust	tainability Plan Project Form, Detai	il: LT2. Propane Fleet	Transitio	on								
		me LT2. Propane Fleet Transition						Focus Area	Land Use & Trans	sportation			
		Not applicable						Established		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
2. Project D	a. Object. b. Measu c. Action	a. Objective: Transition 25 Medium Duty Vehicles (LDVs) usi b. Measure(s): Number of vehicles transitioned per year. Avi c. Action(s): Identify vehicles for replacement each year base with a propane marketer for fuel, which includes the amorti d. Cost(s) / Benefit(s): Costs assume the cost of a bi-fuel pro industry quotes. Training is assumed to cost about \$1600 pe based on industry quotes and published US government res No more than 5 vehicle by type are procured in any year. The e. Funding: The project assumes that vehicles are purchased	oided gasoline use and expenditure. Re ed on remaining useful life and duty cyc zed price of fueling infrastructure as pa ppane kit, assume to be \$6,800 per vehi er person for nine individuals. Benefits learch. Alternative fuel excise tax benefi ne project does not assume replacemen	educed annual countries of the negotia rt of the negotia cle. The cost of the assume a reduc its are assumed t of propane vel	ost per mile. d install a propated \$/gallon. fueling infrastrated fuel cost per and incorpora	pane Autogas bi Train existing flor ructure is assum er mile (FCM) fo ted into the pro	-fuel kit along veet maintenance ed to amortized r EVs versus ICI jected fuel cost	with new replace e staff in diagno d into the cost p E LDVs using 20	ement vehicles ed sis, testing and r eer gallon of prop 19 VMT data. Th	quivalent to a Forepair of propant epair of propant pane, currently a e average FCM l	rd F-250/350/ Autogas vehi ssumed to be penefit is assur	450/550. Enter icles. \$2.09 per gallo ned to be a 42'	n based on % reduction,
3. Responsil	hla Darty	Lead Department / Division	Fleet										
o. Responsi	ole raity	Project Manager	Forrest Hall	ı									
4. Goals		² Reduce LGO GHG Emissions	4,817 MTCO26	2	(or)	75%	helow 2019	baseline by 2	040				
r. Guais		1 Reduce LGO GHG Emissions	2,890 MTCO26		(or)			baseline by 2					
		Base Year	2019		()		DC1011 2013 1	suscime by 2					
		Base Value	6,423 MTCO26	2									
5. Performa	nce	Project Life	10 Years										
7. I CHOHIIA	nec	Project Discount Rate	2.5%										
		Economic Performance	101% Return o	on Investment									
			\$154,000 Net Pres										
		Goal Performance	2.3% of 2040	Focus Area Goa	I								
.			3.8% of 2030	Focus Area Goa	l								
6. Implemer	ntation												
a. Costs	Docnoncibility	Tack	Voor 1 Voor 2	V	oar 2	/oar / \	/oar E	Voor 6	Voor 7 V	oar O V	oor O	Voor 10	Total
Phase equisition	Responsibility Fleet Director	Procure Vehicles Installed with Propane Fuel Systems	Year 1 Year 2 (34,400)	(35,226)	ear 3 (36,071)	Year 4 (36,937)	(37,823)	Year 6 0	Year 7 Y	ear 8 Y	ear 9 0	Year 10	Total (180,457)
taff	Fleet Director	Vocational Training for EV maintenance	(15,000)	0	0	0	0	0	0	0	0	0	(15,000)
			<i>Total</i> (49,400)	(35,226)	(36,071)	(36,937)	(37,823)	0	0	0	0	0	(196,000)
o. Benefits		Resource	e Cost Rate: \$ 4.00 \$/Gaseo	ous Gallon Equiv	alent	Escala	ation Factor	2.40%					
o. Denemes			Year 1 Year 2	Ye	ear 3	Year 4	ear 5	Year 6	Year 7 Y	ear 8 Y	ear 9	Year 10	Total
	Existing Resource U	Jse Gaseous Gallons Equivalent (GGE)	339,854	339,854	339,854	339,854	339,854	339,854	339,854	339,854	339,854	339,854	\$ 3,398,543
	Existing Resource Co		\$ 1,359,417 \$		1,425,452		+ -1.0.1000	\$ 1,530,568	\$ 1,567,301			\$ 1,682,877	
	Projected Avoided Resource L		0	5,769	7,817	9,208	10,952	12,955	12,955	12,955	12,955	12,955	98,521
	Percent Avoided Resource U	Jse <i>Percentage</i>	0%	2%	2%	3%	3%	4%	4%	4%	4%	4%	3%
	Avoided Expenditure / Rever	nue \$/GGE	\$0	\$23,077	\$31,268	\$36,834	\$43,809	\$51,819	\$51,819	\$51,819	\$51,819	\$51,819	\$ 394,083
								·					
		Net Ben	nefit / (Cost) (\$49,400)	(\$12,148)	(\$4,803)	(\$103)	\$5,986	\$51,819	\$51,819	\$51,819	\$51,819	\$51,819	\$198,627

	Project Name	LT3. Fleet Efficiency Upgrades						Focus Area	and Use & Tran	snortation			
		7 Not applicable						<i>Established</i> 2		sportation			
. Project De	a. Objective b. Measure c. Action(s	b. Measure(s): Number of vehicles transitioned per c. Action(s): Identify vehicles for replacement each with a standard gasoline powered model. Procure d. Cost(s) / Benefit(s): Costs assume the increment	useful life. year. Avoided gasoline use and experyear based on remaining useful life are he vehicle via purchase or lease. al cost of purchasing an HEV versus a erage incremental cost of about \$4,000 is using 2019 VMT data. The average Fer year for five years. The project does electric vehicle.	diture. Reduced a d duty cycle. Spec nd equivalent vehi 0 per vehicle. Trai CM benefit is assu not assume repla	nnual cost per ify a fuel-efficie cle. For this casining is assumed imed to be a 46	mile. ent equivalent (e. e, a Ford Escape I to be provided reduction, bas	g., Ford Escape HEV vs. a Ford to existing staff ed on data pub	HEV, Ford Explo Escape, a Ford via the electric lished by EPA. N	orer HEV, Ford l Explorer HEV vs vehicle project a No difference in	Maverick HEV, F . a Ford Explore and are not inclutases and fees,	Ford F-150 HEV) er, a Ford Maver uded here. Bene maintenance, o	instead of replace ck HEV vs. a Fo fits assume a re insurance cost	acing LDVs ard Ranger, a educed fuel s are
. Responsib	ole Party	Lead Department / Division	Fleet M.	nagement									
, 1103p 011310		Project Manager		est Hall									
. Goals		8 Transition 4 Transition Base Year Base Value	20 10 201 31	9	(or) (or)						ectricity by 20 ectricity by 20		
. Performar	nce	Project Life Project Discount Rate Economic Performance	2.59 3189	Years Return on Invest Net Present Value									
		Goal Performance		of 2040 Focus A of 2030 Focus A									
. Implemen	itation												
nase	Responsibility	Task	Year 1								ear 9 Y		otal
quisition	Forrest Hall	Replace Existing Vehicles w/ Fuel Efficient Equivalent	rnts (16,860 <i>Total</i> (16,860	 	(12,604) (12,604)	0	(29,736) (29,736)	0	0	0	0	0	(62,27
0. (4)		R	esource Cost Rate: \$ 4.00		(12,00 1)	'	ition Factor	2.40%	0	0	o	0	(OZ,Z
Benefits			Year 1	Year 2	/ear 3 '	Year 4 Y	ear 5 Y	ear 6 Y	ear 7 Y	'ear 8 Y	'ear 9 Y	ear 10 T	otal
	Existing Resource Us	e Gaseous Gallons Equivalent (GGE)	339,85		339,854	339,854	339,854	339,854	339,854	339,854	339,854	339,854	3,398
	Existing Resource Cos		\$1,359,41	\$1,392,043	\$1,425,452	\$1,459,663	\$1,494,695	\$1,530,568	\$1,567,301	\$1,604,917	\$1,643,435	\$1,682,877	15,160
F	Projected Avoided Resource Us			1,317	5,457	6,792	7,806	8,748	8,748	8,748	8,748	8,748	65
	Percent Avoided Resource Us	3	09	 	2% #21.020	£27,160	2% ¢21,222	3% ¢34.000	3% ¢34.000	\$% \$24,000	3% ¢34.000	3% #24.000	200
	Avoided Expenditure / Revenu	₩ \$/GGE	\$	\$5,267	\$21,829	\$27,169	\$31,223	\$34,990	\$34,990	\$34,990	\$34,990	\$34,990	260
				T .	,							1	
			Vet Benefit / (Cost) (\$16,860	\$2,190	\$9,225	\$27,169	\$1,487	\$34,990	\$34,990	\$34,990	\$34,990	\$34,990	\$19

City of Pompano Beach Sust	ainability Plan Project Form	, Detail: LT4. Opti	imize Fle	et									
1. Project Identification	•												
Project Nam	LT4. Optimize Fleet							Focus Area La	and Use & Trar	nsportation			
Location	Not applicable						Year L	Established 20)24				
d Cost(s) / Renefit(s	b. Measure(s): Number of vehicles removed from c. Action(s): Identify vehicles for divestment each	n the fleet per year due to under year based on utilization, rema ford F-150 HEV). Procure the vel ental cost of purchasing an HEV average incremental cost of about et. Additional cost savings, including is assumed to be a 46% reduction, with pool vehicles added back	er-utilization. Avo aining useful life ehicle via purchas versus and equi out \$4,000 per viding maintenand on, based on dat gradually to me	oided gasoline, duty cycle. Vece or lease. valent vehicle hicle. Training and insurate published leet demand.	e use and expend When removing r e. For this case, a ng is assumed to nce are not inclu by EPA. No differ	diture. Reduced multiple vehicle Ford Escape H be provided to uded in this ana rence in taxes a	d annual cost pe es from service t IEV vs. a Ford E o existing staff v alysis. Benefits a and fees, mainte	er mile. scape, a Ford Expirate the electric version assume reducence or insura	nent, specify a solorer HEV vs. hicle project and ced fuel cost proce costs are a	fuel-efficient vehi a Ford Explorer, a nd are not include per mile (FCM) for assumed. The pro	cle to serve as Ford Mavericked here. Benefit HEVs versus s	a pool vehicle (e t HEV vs. a Ford ts assume avoide tandard LDV poo	.g., Ford Ranger, a ed fuel ol vehicles
3. Responsible Party	Lead Department / Division Project Manager		Fleet Manager Forrest Hal										
	2 Reduce LGO GHG Emissions 1 Reduce LGO GHG Emissions Base Year Base Value		4,817 MTC 2,890 MTC 2019 6,423 MTC	O2e	(or) (or)			paseline by 20 paseline by 20					
5. Performance	Project Life Project Discount Rate Economic Performance		10 Year 2.5% 117% Retu \$50,000 Net	rn on Investn									
	Goal Performance)40 Focus Are									
6. Implementation <i>a. Costs</i>			1.98% of 20)30 Focus Are	a Goal								
Phase Responsibility	Task	Yea											otal
Other Forrest Hall Acquisition Forrest Hall	Surplus Underutilized Vehicles Procure Fuel Efficient Motor Pool Vehicles		(25,580)	(16,394)	(12,604)	0	0	0	0	0	0	0	(54,578)
, constitution		Total Resource Cost Rate: \$	(25,580)	(16,394)	(12,604)	0	0 otion Factor	2.40%	0	0	0	0	(54,578)
b. Benefits													
		Yea											otal
Existing Resource Us Existing Resource Cos	se Gaseous Gallons Equivalent (GGE) t \$/GGE		339,854 \$1,359,417	339,854 \$1,392,043	339,854 \$1,425,452	339,854 \$1,459,663	339,854 \$1,494,695	\$1,530,568	339,854 \$1,567,301	\$1,604,917	\$1,643,435	339,854 \$1,682,877	3,398,543 15,160,368
Projected Avoided Resource Us			973	1,504	1,826	2,084	2,084	2,084	2,084	2,084	2,084	2,084	18,889
Percent Avoided Resource Us	Se <i>Percentage</i>		0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Avoided Expenditure / Revenu	le \$/GGE		\$3,893	\$10,988	\$12,264	\$13,035	\$13,035	\$13,035	\$13,035	\$13,035	\$13,035	\$13,035	118,390
		Net Benefit / (Cost)	(\$21,687)	(\$5,406)	(\$340)	\$13,035	\$13,035	\$13,035	\$13,035	\$13,035	\$13,035	\$13,035	\$63,812

City of Pompano Beach Susta	ainability Plan Project Form, Detail: EO1.	Address Food Deserts	
1. Project Identification			
Project Name	e EO1. Address Food Deserts		Focus Area Equity & Outreach
Location	7 Areas of Pompano Beach that lack access to healthy food		Year Established 2024
2 Project Description	Objective: Identify and implement solutions to address food insecurity in	yulnerable areas of Pompano Beach. The USDA defines an urb	ban food desert as an area where at least 500 people or 33% of the population lives more than 1 mile from the peares
c. Action(s	large grocery store. Measure(s): Income and population density by census tract and percental Action(s): Issue an RFP for a Study to identify areas of the City subject to the suitability of potential solutions such as: farmers markets, bus-stop for such as local Tienda / Bodega / Convenience stores to provide fresh proceeds businesses. It should evaluate grants and other funding opportunities and one or more of the proposed solutions. Cost(s)/Benefit(s): Cost are estimated for two items: a food desert study on the initiative(s) chosen and their design and scope. For illustrative pur food pantry was funded with \$50,000 from the city of North Miami, a \$50 the remainder coming from grant funding and/or non-profit partners. Be improved health outcomes for community members. Benefits would inclidetails such as the exact location of the food pantry and number of peop	age of population that lives more than one mile to a large groce of food insecurity and lack of access, identify stakeholders and pot armers markets, community gardens, food pantries, food coops duce and healthy food options. The study should identify commend prioritize proposed solutions and partnerships, including analytic and implementing recommended solutions from the study. The proposes, costs are modeled on a case study of the NoMi Food Margoses, costs are modeled on a case study should be cost and cost are modeled on a case study should be cost and cost are modeled on a case study should be cost and cost are modeled on a case study should be cost and cost are modeled on a case study should be cost and cost are modeled on a case study should be cost and cost are modeled on a case study should be cost and cost	ban food desert as an area where at least 500 people or 33% of the population lives more than 1 mile from the neares stery store. The study should evaluate and compare to so, government-subsidized grocery stores, government-owned grocery stores, and working with private businesses munity stakeholders and potential partners such as non-profit groups, faith-based organizations, and. private halysis of their costs and impacts. Following the study results, the City should work to secure funding and implement ecost of the food desert study is estimated at \$35,000. Costs of implementing solutions may vary widely depending Market, a joint venture between the City of North Miami, Feeding South Florida and Florida Blue Foundation. This free grant from the Florida Blue Foundation. Under this scenario, the City is assumed to provide \$50,000 in funding, with pano Beach, improving community resilience, ensuring residents have access to affordable, healthful local foods, and a residents of the City, which also could result in less need for medical services. The benefits are not quantified as vide information that could be used to model project costs and benefits in more detail. Which provides grant funding to address food insecurity, has an online map that shows multiple areas of Pompano
3. Responsible Party	Lead Department / Division	TBD	
	Project Manager	TBD	
	0 #N/A 1 #N/A Base Year Base Value	13/73	/A #N/A /A #N/A
5. Performance	Project Life Project Discount Rate Economic Performance	10 Years 2.5% -100% Return on Investment (\$82,000) Net Present Value	
	Goal Performance	N/A of 2040 Focus Area Goal	
6. Implementation a. Costs		N/A of 2030 Focus Area Goal	
Phase Responsibility Staff	Task Issue an RFP and procure a Food Insecurity and Solutions Study	Year 1 Year 2 Year 3 Year 4 (35,000) 0 0 0	Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total 0 0 0 0 0 0 0 (35,000)
Staff	Secure grant funding / develop partnerships		0 0 0 0 0 0 0 0 0 35,000 0 0 0 0 0 0 0 0 0
	Implement one or more solutions recommended by study (e.g., food		
Staff	pantry)	(50,000) 0 0	
	Tota	a/ (35,000) (50,000) 0 0	0 0 0 0 0 0 0 0 0 (85,000
b. Benefits	Resource Cost Rate	Esc Year 1 Year 2 Year 3 Year 4	calation Factor 2.40% Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total
Existing Resource Cost			
Percent Conserve Percent Conserve Avoided Expenditure / Revenu	d		9
	Net Benefit / (Cost	(\$35,000) (\$50,000) \$0 \$0	0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0

1. Project Identification Project Name 1. Coacidor City—vide 1. Objective Increase employee sustainability includes the City offers so that they are better able to educate esidents. Softer input and feedback from staff members about sustainability includes the bused, and box activates of the Sustainability training morphisms to the sustainability training morphisms from the Sustainability training morphisms from the Sustainability and offers the Sustainability Coordinator. The plan should specify frequency of training, incretives for employees, the training materials to be used, and box activates of the Sustainability and offer recently feltins, gift card, extra causal dress deep starting events to reach all City (Start) (Starting) and secretary and secretary of the Sustainability Coordinator. The plan should specify frequency of training, incretives for employees, the training materials to be used, and box activated by the Interest Starting and the Sustainability Coordinator. The plan should specify frequency of training, incretives for employees, the training materials to be used, and box activated by the Interest Starting and the Sustainability Coordinator. The plan should specify frequency of training, incretives for employees, the training materials to be used, and box activated by the Interest Starting events to reach all the contract of the City Starting events to reach all the contract of the City Starting events to reach all the contract of the City Starting events to reach all the contract of the City Starting events to reach all the Contract of the City Starting events to reach all the Contract of the City Starting events to reach all the Contract of the City Starting events to reach all the Contract of the City Starting events to reach all the Contract of the City Starting events to reach all the Contract of the City Starting events to reach all the Contract of the City Starting events to reach all the Contract of the City Starting events to reach all the Contract of the City Starting events to reac
2. Project Description Objective: Increase employee awareness of City sustainability programs and policies. Help to achieve behavior change in City employees so that they conduct their daily activities in a more sustainability increase employee participation in sustainability initiatives. Educate employees about sustainability initiatives sustainability initiatives and considerable of the design of the part of
2. Project Description 2. Objective Increase employee avareness of City sustainability programs and policies. Help to achieve behavior change in City employees so that they conduct their daily activities in a more sustainability initiatives. Educate employees avareness of City sustainability programs and policies. Action (S)
a. Objective employees about sustainability initiatives the City offers so that they are better able to educate residents. Garbei input and feedback from staff members about sustainability programs/policies. **Beasures*** Issuer policy of staff members receive sustainability training. **Develop a plan for an employee sustainability training materials to be used, and how care assured from the fourty by additionable of the fourty of training will be tracked. Receive approval from Human Resources Director and City Manager, if needed. Set up multiple training events to reach all City employees. Track number of employees participating in sustainability projects. Create sustainability projects to raise internal of the complete of the project policy and control of the complete of the project participating in sustainability projects. Create sustainability projects to raise internal of the complete starting and variation day). **Descriptions** Receive approval from Human Resources Director and City Manager, if needed. Set up multiple training events to reach all City employees. Track number of employees participating in sustainability projects to raise internal of the complete of the project of the sustainability projects or as establishing programs, fine each of the complete of the project of the public. If staff better understand programs, they will be able to communicate to residents more effectively. Funding: This is a low-cost initiative that could be paid for out of the City's general fund. Staff time will be needed to complete this project. **Sustainability programs/policies.** **Action(s) Description: The complete of the public of the public. If staff better understand programs, they will be able to communicate to residents more effectively. Funding: This is a low-cost initiative that could be paid for out of the City's general fund. Staff time will be needed to complete this project. **Action(s) Description: The complete of the p
a. Objective employees about sustainability initiatives the City offers so that they are better able to educate residents. Garbei input and feedback from staff members about sustainability programs/policies. **Beasures*** Issuer policy of staff members receive sustainability training. **Develop a plan for an employee sustainability training materials to be used, and how care assured from the fourty by additionable of the fourty of training will be tracked. Receive approval from Human Resources Director and City Manager, if needed. Set up multiple training events to reach all City employees. Track number of employees participating in sustainability projects. Create sustainability projects to raise internal of the complete of the project policy and control of the complete of the project participating in sustainability projects. Create sustainability projects to raise internal of the complete starting and variation day). **Descriptions** Receive approval from Human Resources Director and City Manager, if needed. Set up multiple training events to reach all City employees. Track number of employees participating in sustainability projects to raise internal of the complete of the project of the sustainability projects or as establishing programs, fine each of the complete of the project of the public. If staff better understand programs, they will be able to communicate to residents more effectively. Funding: This is a low-cost initiative that could be paid for out of the City's general fund. Staff time will be needed to complete this project. **Sustainability programs/policies.** **Action(s) Description: The complete of the public of the public. If staff better understand programs, they will be able to communicate to residents more effectively. Funding: This is a low-cost initiative that could be paid for out of the City's general fund. Staff time will be needed to complete this project. **Action(s) Description: The complete of the p
4. Goals 8 Reduce electricity consumption for LGO 7 Reduce electricity consumption for LGO 397,238 kWh 92040 Rase Year Base Value 5. Performance Project Life Project Discount Rate Max Wemyss 794,476 kWh 979,476 kWh 9
4. Goals 8 Reduce electricity consumption for LGO 7 Reduce electricity consumption for LGO 397,238 kWh 92040 Rase Year Base Value 5. Performance Project Life Project Discount Rate Max Wemyss 794,476 kWh 979,476 kWh 9
4. Goals 8 Reduce electricity consumption for LGO 7 Reduce electricity consumption for LGO 397,238 kWh (or) 15% by 2030 Base Year 2019 Base Value 5. Performance Project Life Project Discount Rate 10 Years 2.5%
7 Reduce electricity consumption for LGO Base Year Base Value 5. Performance Project Life Project Discount Rate 7 Reduce electricity consumption for LGO Suppose Su
7 Reduce electricity consumption for LGO Base Year Base Value 5. Performance Project Life Project Discount Rate 7 Reduce electricity consumption for LGO Suppose Su
Base Year Base Value 2019 2,648,253 kWh 5. Performance Project Life Project Discount Rate 2019 2,648,253 kWh Years 2.5%
5. Performance Project Life Project Discount Rate Project Discount Rate 2,648,253 kWh Years 2.5%
5. Performance Project Life Project Discount Rate 10 Years 2.5%
Project Discount Rate 2.5%
Project Discount Rate 2.5%
Economic Performance 12% Return on Investment
\$3,000 Net Present Value
Goal Performance 3% of 2040 Focus Area Goal
1% of 2030 Focus Area Goal
6. Implementation
a. Costs
Phase Responsibility Task Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total
Staff Sustainability Coordinator Develop Training Content 0 0 0 0 0 0 0 0 0
Staff Sustainability Coordinator Begin Training Current Employees (in-person training cost) 0 0 0 0 0 0 0 0 0
Staff Sustainability Coordinator Continue ongoing training to employees (new hires, refresher) 0 0 0 0 0 0 0 0 0 0 0 0
Staff Sustainability Coordinator Incentive Program 0 (3,500) (3
Total 0 (3,500) (3,500
Resource Cost Rate: N/A Escalation Factor 2.40%
b. Benefits
Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total
Electricity Resource Use Reduction Annual electricity expenditure 2,648,253
Percent Conserved % of annual expenditures saved via increased awareness 0.0% 0.1%
Amount of Electricity Conserved (kWh) Annual avoided utility expenditure via increased awareness 0 2600 2600 2600 2600 2600 2600 2600
Existing Resource Use Annual electricity, fuel, and water expenditures \$3,482,520 \$3,566,100 \$3,551,686 \$3,739,327 \$3,829,071 \$3,920,969 \$4,015,072 \$4,111,433 \$4,210,108 \$4,311,150 38,837,436
Avoided Expenditure / Revenue Annual avoided utility expenditure via increased awareness \$0.00 \$3,700.00 \$3,700.00 \$4,000.00 \$4,000.00 \$4,200.00 \$4,300.00 \$35,300
Net Benefit / (Cost) \$0 \$100 \$200 \$300 \$400 \$500 \$600 \$700 \$800 \$3,800

	fication Project Nam	PE1. Hybrid Work Policy		Facus Area Dalini O Facus and	
		7 City Hall		Focus Area Policy & Economics Year Established 2024	
?. Project Descrip	a. Objectiv b. Measure	reducing energy use in City office buildings by allowing lighting ar Measure(s): Number of employees working remotely, electricity sa Action(s): Develop and implement a hybrid work protocol for eligible. Create guidelines for eligibility for employees to participate in the employee satisfaction with the policy and solicit feedback for poter Cost(s)/Benefit(s): The development of the policy is expected to be provide reductions in energy and resources (i.e., office supplies an working remotely (assumed 50%) is applied to energy use at the Cand the monetary value of reduced GHG emission was calculated and the moneta	nd plug load demands to be reduced. This initiative will also provings in kWh, GHG reductions in MTCO2e, and employee satisfable employees. Create standards and procedures for hybrid work program. Track benefits including energy reductions from reduction and the policy, if warranted. Use Human Resources low to no cost for the City. It is assumed that the policy is develd other materials). The monetary savings from energy is estimatify Hall building, specifially a reduction in lighting and plug load using the average value of carbon credits the City might otherwitted to have a social benefit by increasing employee satisfaction.		in the office, standards for home-work spaces, etcoloyee commutes. Conduct a survey to determine aductivity, if feasible. ts. The policy, once implemented, is expected to culate benefits, the percentage of employees employee commuting reduction were estimated, ovide a reduction in Scope 3 emissions for the City
. Responsible Pa	Party	Lead Department / Division Project Manager	Sustainability Max Wemyss		
			MidA Welliyss	1 2050	
. Goals		9 Reduce electricity consumption for LGO 1 Reduce LGO GHG Emissions	1,191,714 (or)	45% by 2050	
		1 Keduce LGO GHG EMISSIONS Base Year	2,890 (or) 2019	45% below 2019 baseline by 2030	
		Base Value	2,648,253 kWh		
		buse value	2,0 10,233 KWII		
. Performance		Project Life	10 Years		
		Project Discount Rate	2.5%		
		Economic Performance	∞ Return on Investment		
		6 10 6	\$148,000 Net Present Value		
		Goal Performance	7% of 2050 Focus Area Goal 19% of 2030 Focus Area Goal		
5. Implementatio	nn		1976 of 2030 Focus Area Goal		
a. Costs	JII				
hase	Responsibility	Task	Year 1 Year 2 Year 3 Year 4	Year 5 Year 6 Year 7 Year 8 Ye	ear 9 Year 10 Total
taff		Develop & Implement Hybrid WorkPolicy	0 0 0	0 0 0 0 0	0 0 0
aff aff		Track hybrid Work Policy Metrics / Benefits Conduct a Survey to Gauge Employee Satisfaction with the Policy	0 0 0	0 0 0 0 0 0 0 0 0 0 0	0 0 0
311		Conduct a survey to dauge Employee Sausiaction with the Policy	<i>Total</i> 0 0 0	0 0 0 0 0	0 0 0
D (*)		Resource Cost	Rate: \$ 0.156	Escalation Factor 2.40%	
n Kanatite			Year 1 Year 2 Year 3 Year 4	Year 5 Year 6 Year 7 Year 8 Ye	ear 9 Year 10 Total
, Dellellis		S Baseline employee commuting GHG emissions (MTCO2e)		1,126 1,126 1,126 1,126 1,126	1,126 1,126 11,25
, Dellellis	Existing Emission		157,328 157,328 157,328 1	157,328 157,328 157,328 157,328 157,328	157,328 157,328 1,573,27
, Denenis	Existing Resource Us	e Baseline electricity usage for plug loads and lighting in City Hall			
. Denenis	Existing Resource Use Existing Resource Cos	t Escalated cost of RECs (per MTCO2e)	\$ 5.28 \$ 5.41 \$ 5.54 \$	5.67 \$ 5.81 \$ 5.95 \$ 6.09 \$ 6.24 \$	
o. Benefits	Existing Resource Use Existing Resource Cos Existing Resource Cos	t Escalated cost of RECs (per MTCO2e) t Escalated electricity cost per kWh	\$ 5.28 \$ 5.41 \$ 5.54 \$ \$ 0.156 \$ 0.160 \$ 0.164 \$	0.168 \$ 0.172 \$ 0.176 \$ 0.180 \$ 0.185 \$	0.189 \$ 0.194 -
	Existing Resource Use Existing Resource Cose Existing Resource Cose Percent Conserve	t Escalated cost of RECs (per MTCO2e) t Escalated electricity cost per kWh d Percentage of employees telecommuting	\$ 5.28 \$ 5.41 \$ 5.54 \$ \$ 0.156 \$ 0.160 \$ 0.164 \$ 50% 50% 50%	0.168 \$ 0.172 \$ 0.176 \$ 0.180 \$ 0.185 \$ 50% 50% 50% 50% 50% 50%	0.189 \$ 0.194 - 50% 50% -
	Existing Resource Use Existing Resource Cose Existing Resource Cose Percent Conserve	t Escalated cost of RECs (per MTCO2e) t Escalated electricity cost per kWh	\$ 5.28 \$ 5.41 \$ 5.54 \$ \$ 0.156 \$ 0.160 \$ 0.164 \$ 50% 50% 50%	0.168 \$ 0.172 \$ 0.176 \$ 0.180 \$ 0.185 \$	0.189 \$ 0.194 -
	Existing Resource Use Existing Resource Cose Existing Resource Cose Percent Conserve	t Escalated cost of RECs (per MTCO2e) t Escalated electricity cost per kWh d Percentage of employees telecommuting	\$ 5.28 \$ 5.41 \$ 5.54 \$ \$ 0.156 \$ 0.160 \$ 0.164 \$ 50% 50% 50%	0.168 \$ 0.172 \$ 0.176 \$ 0.180 \$ 0.185 \$ 50% 50% 50% 50% 50% 50%	0.189 \$ 0.194 - 50% 50% -
	Existing Resource Use Existing Resource Cose Existing Resource Cose Percent Conserve	t Escalated cost of RECs (per MTCO2e) t Escalated electricity cost per kWh d Percentage of employees telecommuting	\$ 5.28 \$ 5.41 \$ 5.54 \$ \$ 0.156 \$ 0.160 \$ 0.164 \$ 50% 50% 50%	0.168 \$ 0.172 \$ 0.176 \$ 0.180 \$ 0.185 \$ 50% 50% 50% 50% 50% 50%	0.189 \$ 0.194 - 50% 50% -

1. Project	Identification			,				-9					
,		PE2. Sustainability Data Management & Reporting						Focus Area Po	olicy & Econom	ics			
	Location	City-wide						Established 20	•				
2. Project I	c. Action ₍	Measure(s): Achievement of objectives. Measure(s): Procure and utilize a customized data management solution to sustainability metrics, and the ability to generate reports summarizing metrics.	the sustainability track the perform etrics and analyzir entiment about sus eport. Present report vill require hiring a g staff time. Benef lt in energy, fuel a	program that in ance of the Citage trends. Deve trainability choicert to City empora consultant to cits include impand water saving	dentifies the aud y's sustainability lop a communica ces/programs, an loyees and mana develop a databa roving the mana gs for the City, co	projects. This da ations plan for Po nd to gather emp gement. After pu ase/software tool gement and perf onservatively esti	tabase or web-lompano Beach's ployee commutiublication, refine formance of the imated at 0.2%	based tool shoul s sustainability p ing data. Develo e the progress re ated cost arounc e sustainability pr of annual expen	d have a dashb rogram that inco o an internal pr port into a tem \$65,000. The co rogram and rais ditures. The an	cations. Publish a poard allowing the cludes identifying rogress report on aplate for an anni communications sing employee avenual report will in	e City's sustain g target audien the sustainabil ual sustainabili plan, sustainab wareness and s ncrease the sus	cainability program pro cability manager to tra ces along with strated dity program and imp ity report that can be solity progress report a cupport of the sustaina stainability program's	ogress report ack key. gies and media elementation of implemented and annual ability
3. Respons	sihle Party	Lead Department / Division	Cuctain	ahility									
J. Nespuns	SIDIC Fally	•	Sustain	•									
		Project Manager	Max We	emyss									
4. Goals		8 Reduce electricity consumption for LGO	794,476	кWh	(or)	30%	by 2040						
i. Godis		7 Reduce electricity consumption for LGO	397,238	кWh	(or)		by 2030						
		Base Year	2019				-)						
		Base Value	2,648,253	κWh									
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,										
5. Performa	ance	Project Life Project Discount Rate	10 \ 2.5%	Years									
		Economic Performance	19%	Return on Inve	stment								
				Net Present Va									
		Goal Performance		of 2040 Focus A									
C Imamiana			1.33% (of 2030 Focus <i>F</i>	Area Goal								
6. Impleme	entation												
a. Costs	Responsibility	Took	Voor 1	Voor 2	Voor 2	loor 1 V	oor E V	loar 6 V	oor 7 V	/oar 0 V	or O V	ear 10 Total	
Phase Other	Responsibility	Task Procure a sustainability data management solution	Year 1 (65,000)	Year 2	Year 3 \	Year 4 Y	ear 5 Y	<u>ear 6</u> Yo	ear / Y	<u>'ear 8 Ye</u> 0	ear 9 Y 0	rear 10 Total 0	(65,000)
Staff		Develop a sustainability communications plan	0 (03,000)	0	0	0	0	0	0	0	0	0	0
Staff		Develop an internal progress report on the sustainability program	0	0	0	0	0	0	0	0	0	0	0
Staff		Develop and publish an annual sustainability report	0	0	0	0	0	0	0	0	0	0	0
		Tota.	(65,000)	0	0	0	0	0	0	0	0	0	(65,000)
		Resource Conservation Value:	¢1 //05	per gge of fuel		Fscala	ntion Factor	2.40% pe	ar voar				
		Resource conservation value.	\$0.156			Lacaia	ition ractor	2.4070 pt	ti yeai				
b. Benefits					Year 3	/ear 4 Y	ear 5 Y	ear 6 Y	ear 7 Y	ear 8 Ye	ear 9 Y	'ear 10 Total	
	Existing Resource U	Se Annual electricity, fuel and water expenditures	3,482,520	3,566,100	3,651,686	3,739,327	3,829,071	3,920,969	4,015,072	4,111,433	4,210,108	4,311,150	38,837,436
		ed % of ann. expenditures saved via increased awareness	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0
		on Avoided Electricity Consumption (kWh)	5,297	5,297	5,297	5,297	5,297	5,297	5,297	5,297	5,297	5,297	52,965
		on Avoided Fuel Consumption (GGE)	680	680	680	680	680	680	680	680	680	680	6,797
		ue Ann. avoided utility expenditure via increased awareness	\$7,000	\$7,100	\$7,300	\$7,500	\$7,700	\$7,800	\$8,000	\$8,200	\$8,400	\$8,600 \$	77,600
										,			
		Net Benefit / (Cost,	(\$58,000)	\$7,100	\$7,300	\$7,500	\$7,700	\$7,800	\$8,000	\$8,200	\$8,400	\$8,600	\$12,600

City of Pompano Beach Sustainability Plan Project Form, Detail: PE2. Sustainability Data Management & Reporting

APPENDIX B: AGENDA, SLIDES AND MINUTES FROM STAFF WORKSHOP



CITY OF POMPANO BEACH SUSTAINABILITY PROJECT PORTFOLIO COLLABORATIVE WORKSHOP AGENDA:

Meeting Date: Wednesday, March 9, 2022, 1:30 – 4:30 PM EST

Meeting Place: Virtual – Call in

Participants: RS&H, Inc.

Nathan Stinnette, Project ManagerBen Moore, Sustainability Leader

Rikki Scantlan, Environmental Specialist

City of Pompano Beach

- Max Weymss, Sustainability Coordinator
- John Sfiropoulos, City Engineer
- Jean Dolan, Principal Planner
- Randolph Brown, Utilities Director
- Michael Taylor, Stormwater Supervisor
- Molly Thistle, Reuse Outreach and Water Conservation
- Whitney Walsh, Utility Billing Manager
- Robert Mccaughan, Public Works Director
- George Buenaventura, Facilities Maintenance Operations Director
- Eugene Zamoski, Chief Information Officer
- Peter Mcginnis, Fire Marshal
- Kimberly Spill-Cristiano, Emergency Manager
- Horacio Danovich, GO Bond / Innovation District
- Tammy Good, CIP Manager
- Forrest Hall, Fleet Manager
- Kathryn Mcbryde, Vehicle Service Office Assistant
- Steve Rocco, Air Park Manager
- Bobby Bush, Senior Human Resources Analyst
- Michael Rada, Building Official
- Mario Sotolongo, Code Compliance Director
- Nguyen Tran, Community Redevelopment Agency Director
- Mark Beaudreau, Recreation Programs Admin
- David Recor, Development Services Director
- Jennifer Gomez, Asst Development Services Dir
- Brian Donovan, Earl Bosworth, Suzette Sibble, Assistant City Managers
- Russell Ketchem, Solid Waste Operations Manager
- Beth Dubow, Recycling Specialist
- Erjeta Diamanti, Budget Manager
- Carla Byrd, General Services Director
- Chris Clemens, Economic Development Manager
- Alexander Goldstein, Program Compliance Manager



1.	Introductions	1:30 – 1:40 PM
	1.1. Meeting Agenda	
	1.2. Consultant Team	
	1.3. Pompano Beach Team	
2.	Previous Sustainability Progress	1:40 - 2:15 PM
	2.1. Prior Work with the City	
	2.2. Work Plan	
	2.3. Sustainability Vision & Focus Areas	
	2.4. Sustainability Baseline Overview	
3.	Sustainability Goals	2:15 - 2:35 PM
	3.1. SMART Goals	
	3.2. Climate Action Goal	
	3.3. Focus Area Goals	
	3.4. Backcasting concept	
	3.5. How Projects will contribute to meeting goals	
4.	<u>Break</u>	2:35 – 2:45 PM
	4.1. 10 minute break	
5 .	Preliminary Project Ideas	2:45 - 3:20 PM
	5.1. Priority Project Ideas in each Focus Area	
	5.2. Polling exercise – Participant Feedback on Projects	
6.	Developing Projects	3:20 – 4:10 PM
	6.1. How to Develop Sustainable Management Plans for Projects	
	6.2. 30 minute Breakout Session (Developing SMPs in Mural)	
7 .	Next Steps - Working Groups	4:10 – 4:15 PM
8.	Adjourn	4:15 PM



Agenda

CoPB Sustainability
Project Portfolio
Collaborative
Workshop

- 1 Introductions
- Previous Sustainability Progress
- 3 Sustainability Goals
- 4 Preliminary Project Ideas
- 5 Developing Projects
- 6 Next Step: Working Groups
- 7 Q&A / Adjourn

RS&H Project Team



Ben Moore AICP, LEED O+M, GPCP Sustainability Leader



Nathan Stinnette SEP, ENV-SP, Urban GHG Specialist **Sustainability Planner**



Rikki Scantlan ENV-SP **Environmental Specialist**

Introductions

Your Department #1
Sustainability
Opportunity

Navigate to:
PollsEV.com/rshenvs
p718

on your computer or mobile device

Your Department



Your #1 Sustainability Activity

Top



Your #1 Sustainability Activity

Top

- Work From Home
- charging stations
- Less electricity in buildings
- sea level rise
- LED Fixtures
- Electric Vehicle Infrastructure
- sea level rise

Your #1 Sustainability Activity

Top

Reduce consumption ² Reuse Community Risk Reduction Exterior Home Weatherization Recycling education and support Hide 1 ☆ LED Fixtures LED fixtures

Prior Work with CoPB

Sustainability Strategy Staff Interviews

Qualitative Baseline

Benchmarking

Initial Collaborative Workshop

Workplan

Sustainability Work Plan



Prior Work with CoPB

Quantitative
Baseline,
Greenhouse
Gas Inventory

Quantitative Baseline

GHG Inventory and Forecast

Sustainability Goals

Commission Presentation



What is Sustainability?

- » The Triple Bottom Line (TBL)
- » Idea of maintaining over time:
 - Environmental quality
 - Quality of life
 - Economic prosperity



CoPB's Sustainability Vision

"The City of Pompano Beach is committed to protecting and improving environmental quality, community cohesion and shared prosperity through innovative investment in climate change resilience, resource conservation and materials management, land use and transportation, and education and culture."

Focus Areas







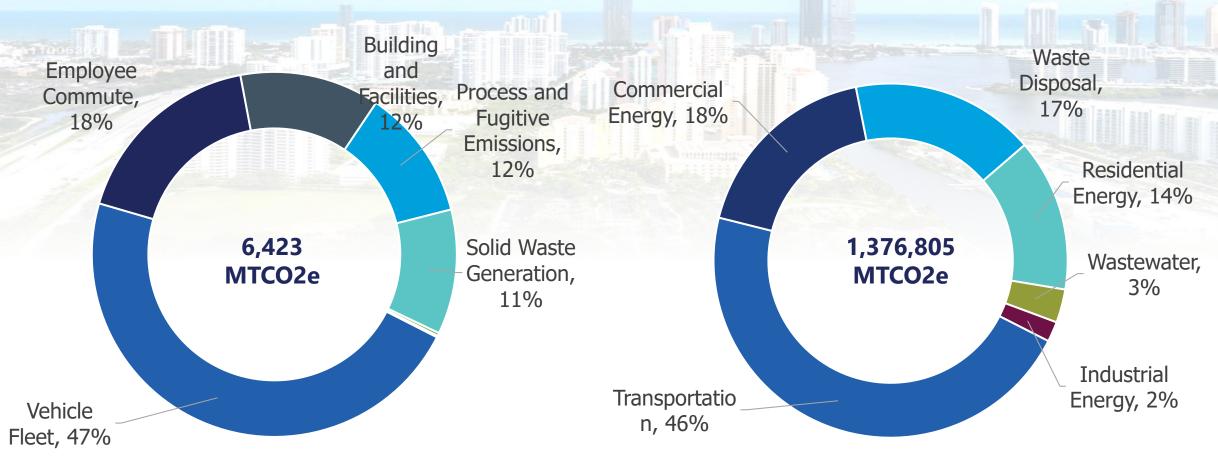








GHG emissions are below the median for local governments in the region.

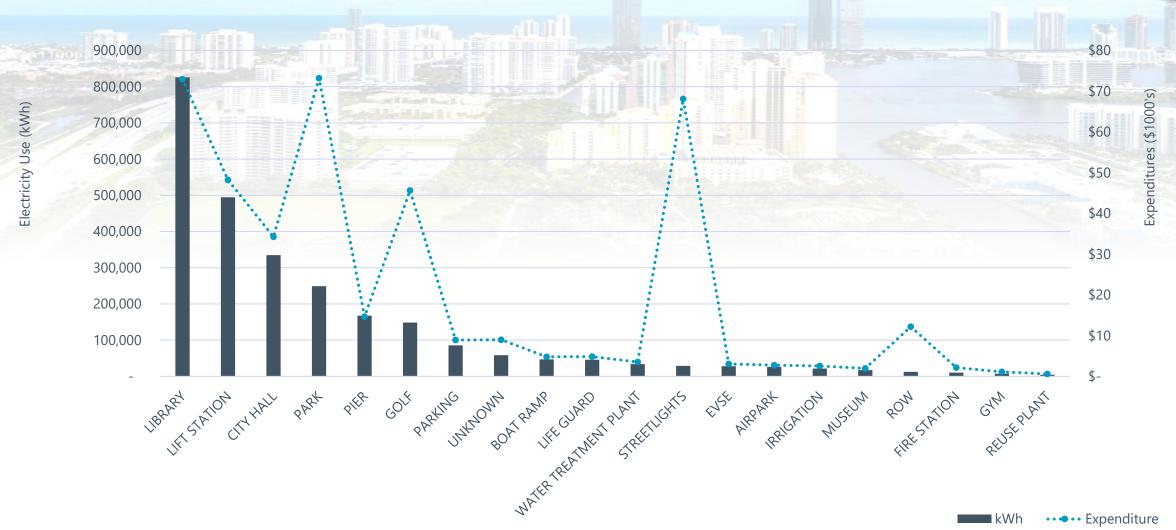


2019 Local Government Operation GHG Emissions

2019 Community GHG Emissions

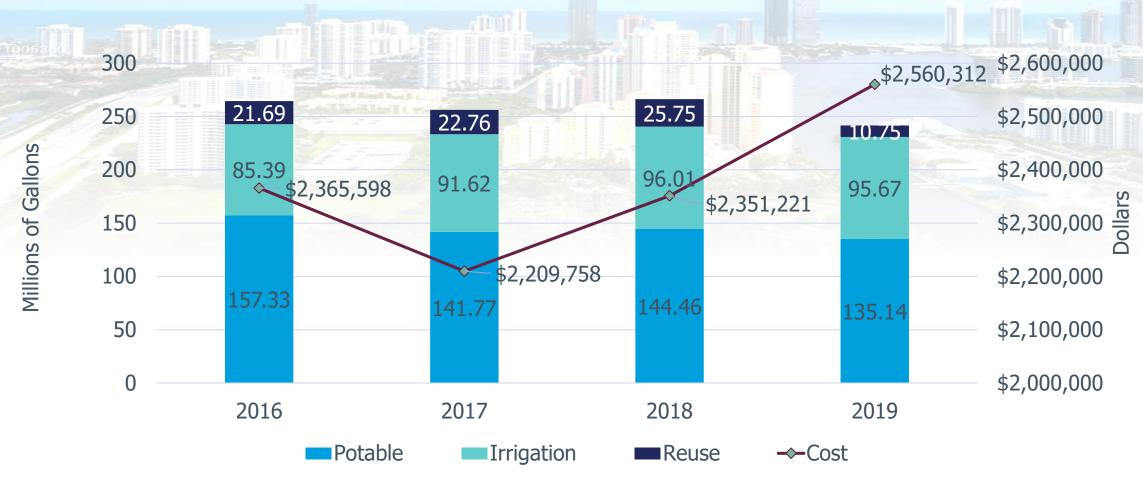


City facilities consumed 2,648,253 (kWh) of electricity at a cost of \$414,446.



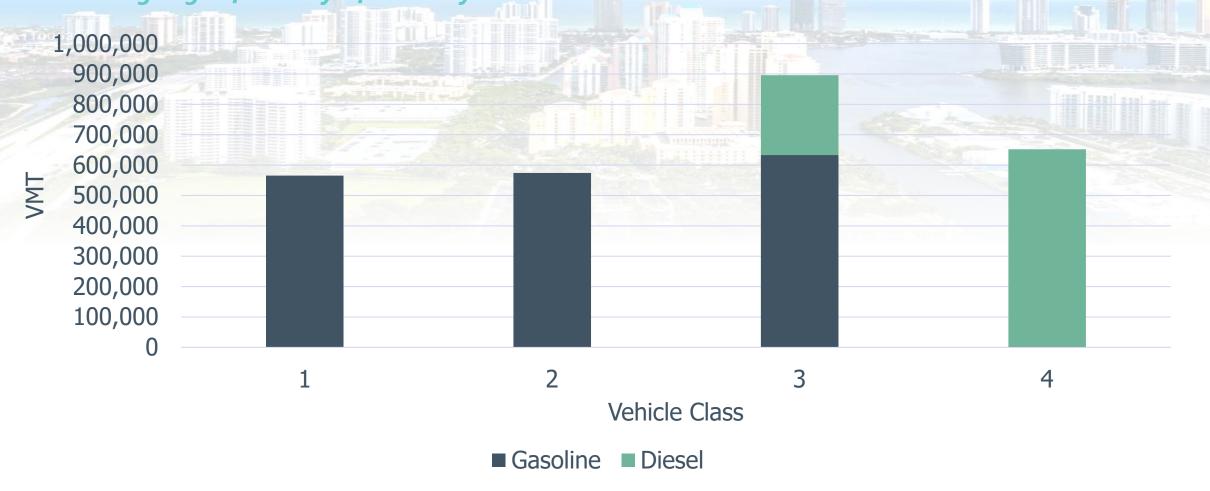


Water use in City facilities is falling, but costs continue to rise.



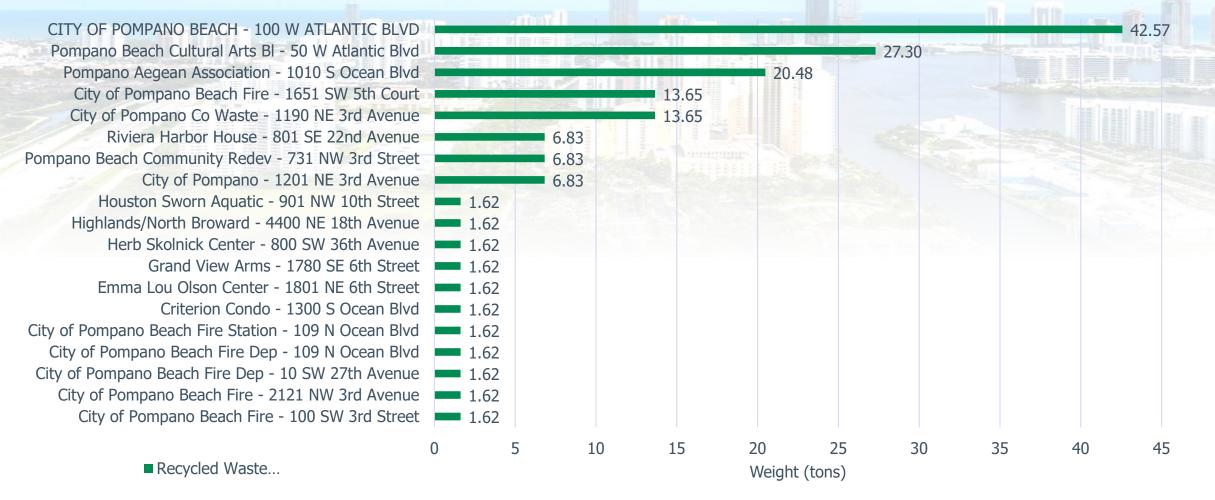
Land Use & Transpor.

316 City vehicles drove ~2.6 million miles, consuming ~160k gallons of gasoline and diesel. The average age of the City's fleet is 8 years old.



The City's waste diversion rate is estimated at 15%.







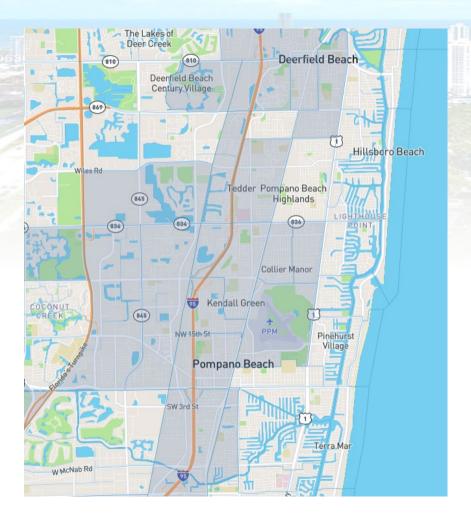
The City has received over \$2 million in recent grant funding for projects related to sustainability.

Grant Name	Requested	Awarded	Source
Florida Resilient Coastlines Program	\$185,000	TBD	FDEP
City of Pompano Beach Sustainability Project Portfolio	\$45,000	\$45,000	FDEO
City of Pompano Beach Sustainability Baseline and Goals	\$35,000	\$35,000	FDEO
City of Pompano Beach Reuse Expansion	\$600,000	\$500,000	SFWMD
Fluoride System Replacement	\$107,000	\$107,000	Florida Department of Health, Dental Program
Broward County IWRP Reuse Grant	\$700,000	\$200,000	Broward County
Water Interconnects Rehabilitation	\$287,500	\$287,500	State Appropriations
Reuse in NE and LHP	\$500,000	\$400,000	SFWMD
Avondale Stormwater	\$2,694,067	\$300,000	FDEP 319 Grant
Reuse NE Expansion Grant	\$1,350,000	\$300,000	Florida State

RS&H







JUSTICE

40

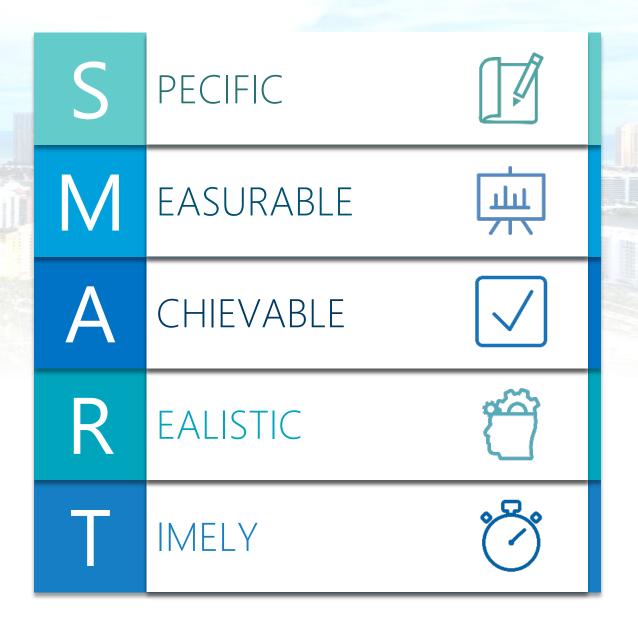
Setting SMART Goals

12 Goals

Organized by focus area Long-term, mid-term, short-term

Example:

Reduce electricity consumption for City operations by 15% by 2030.



Setting Goals: Milestones Short-term / 2030 **Mid-term / 2040**

Long-term / 2050

Long-Term Resource Conservation Goals

Electricity Consumption



Reduce electricity consumption for City operations by 45% by 2050

Renewable Energy



Achieve 100% renewable energy supply for City operations by 2050

Water Use



Reduce potable water use by 40% from 2019 baseline by 2050

Long-Term Materials Management Goals





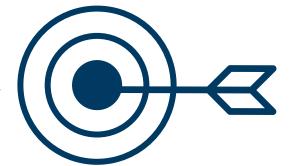
100% of all City purchases meet sustainable purchasing criteria under the City's Sustainable Procurement Policy by 2050.

Waste Diversion



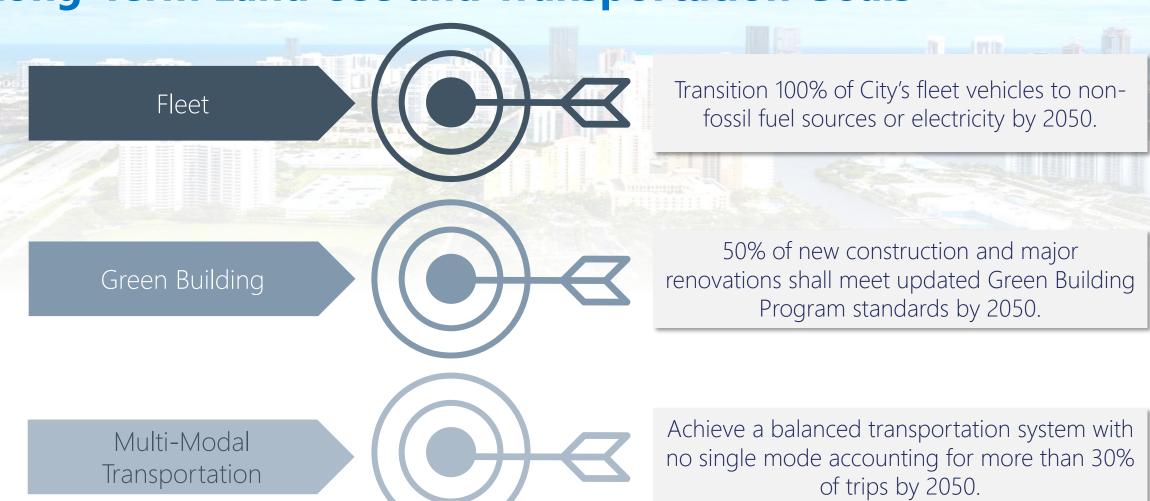
Achieve a 75% LGO and community diversion rate.

Paperless Policy

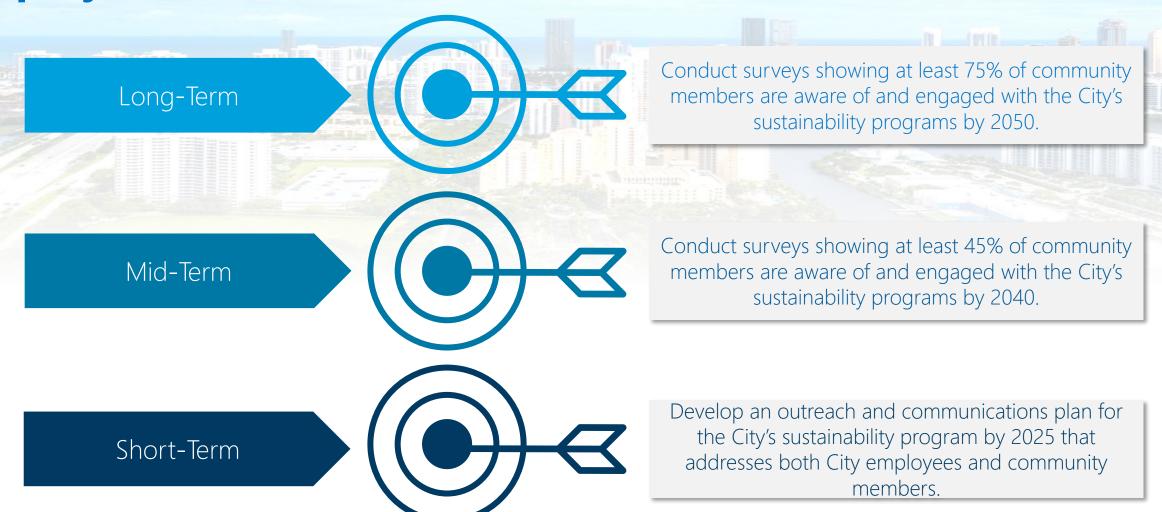


75% reduction in paper use realized under the terms of the Policy by 2050.

Long-Term Land Use and Transportation Goals



Equity and Outreach Goal



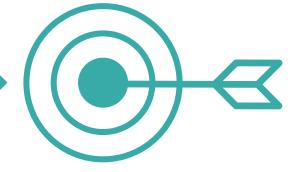
Policy and Economics Goal

Long-Term



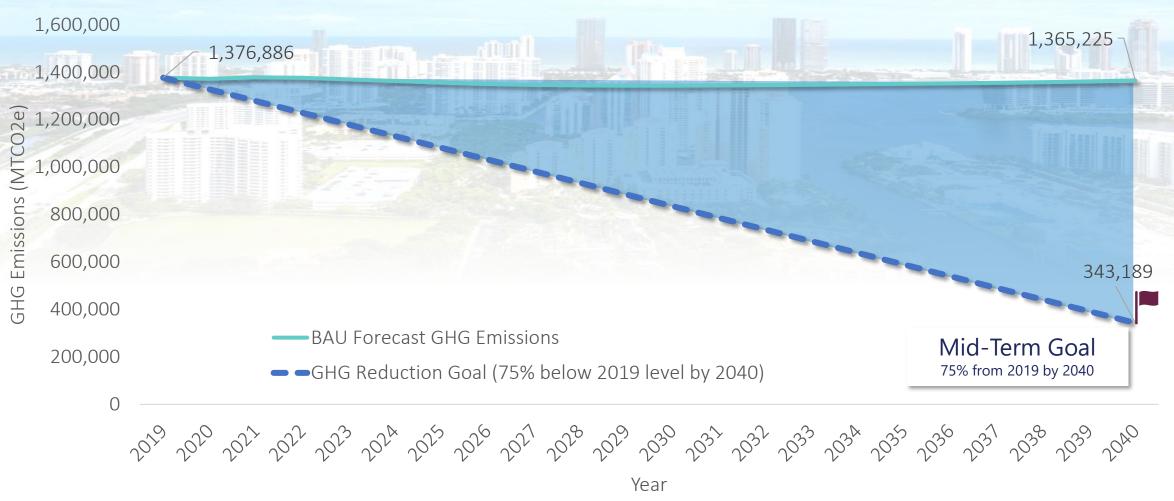
Achieve a self-funding sustainability program in which cost savings realized by efficiency and resource conservation initiatives fund at least 50% of new initiatives by 2050.

Short-Term



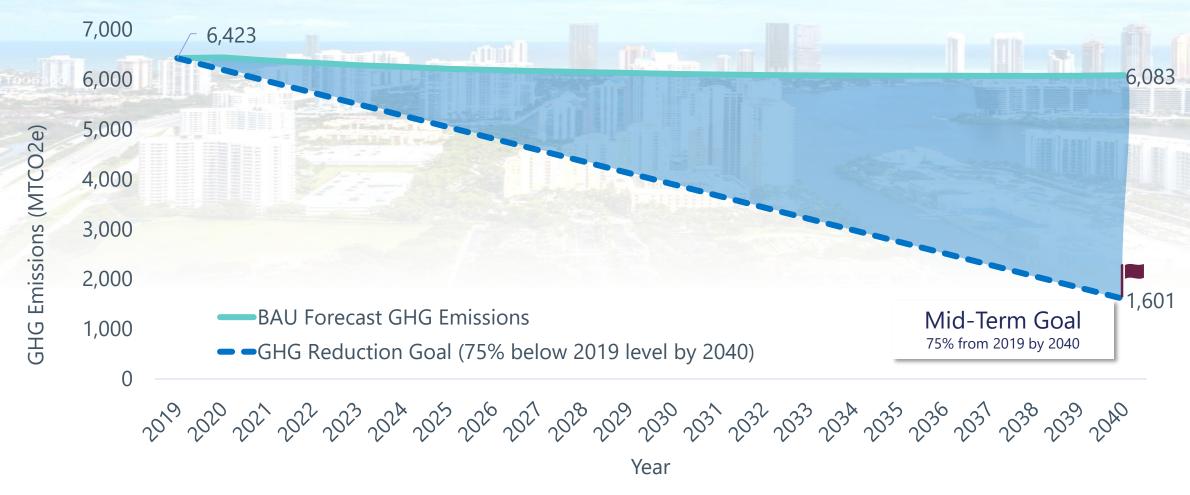
Establish a sustainability revolving fund (SRF) by 2025 and fund selected sustainability initiatives to be developed in Phase 3 of the Work Plan.

Climate Action Goal



Community GHG Emissions Forecast

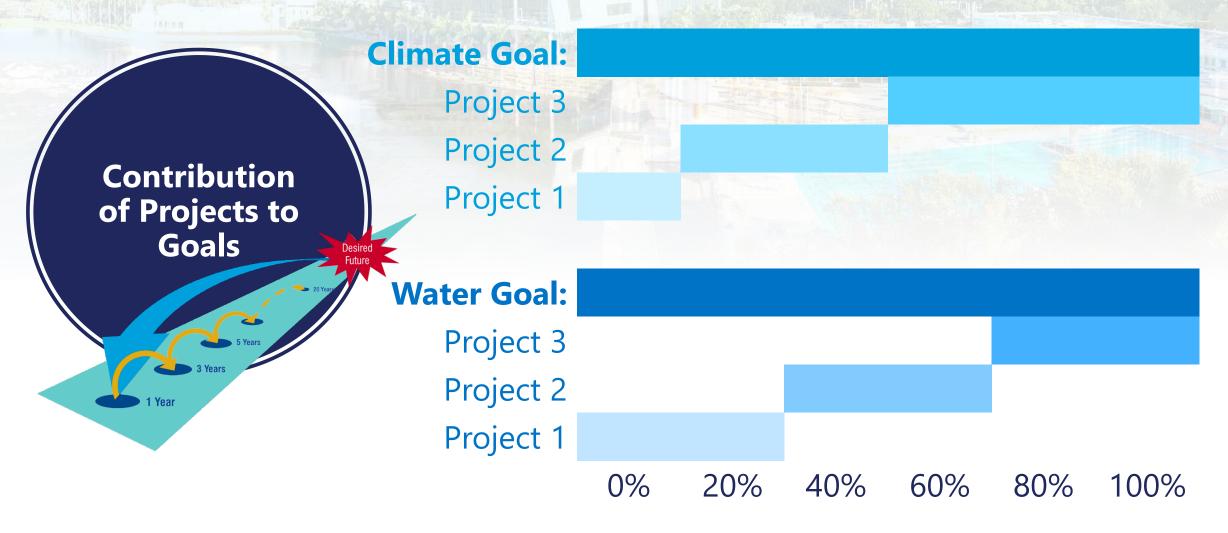
Climate Action Goal



Local Government Operations GHG Emissions Forecast



Link Projects to Goals Using Backcasting

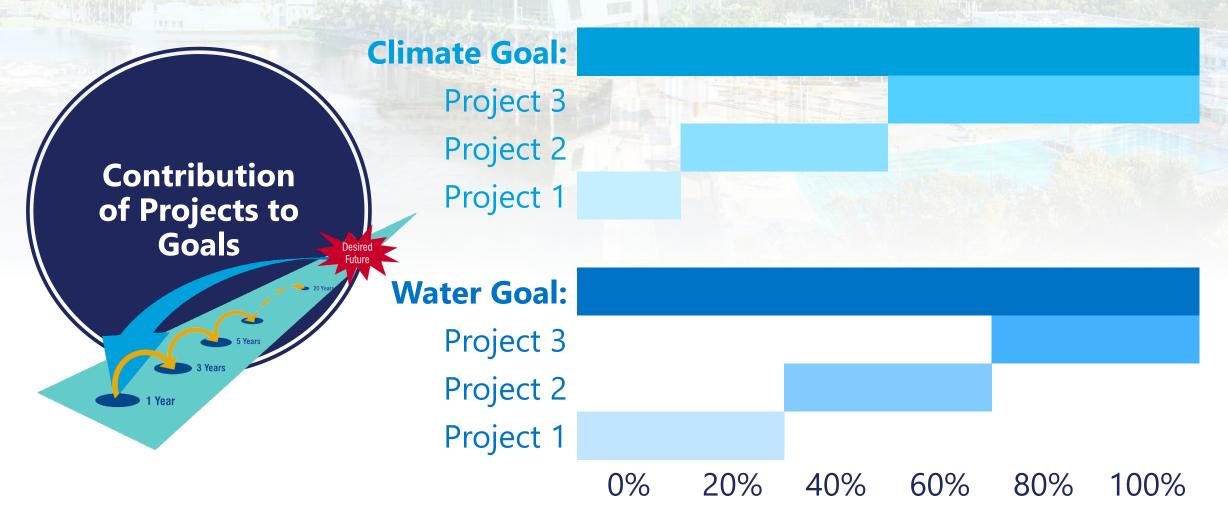




10 Minute Break



Link Projects to Goals Using Backcasting



Preliminary Resource Conservation Projects

Energy Audits at Selected Facilities

Recommission Existing Facilities

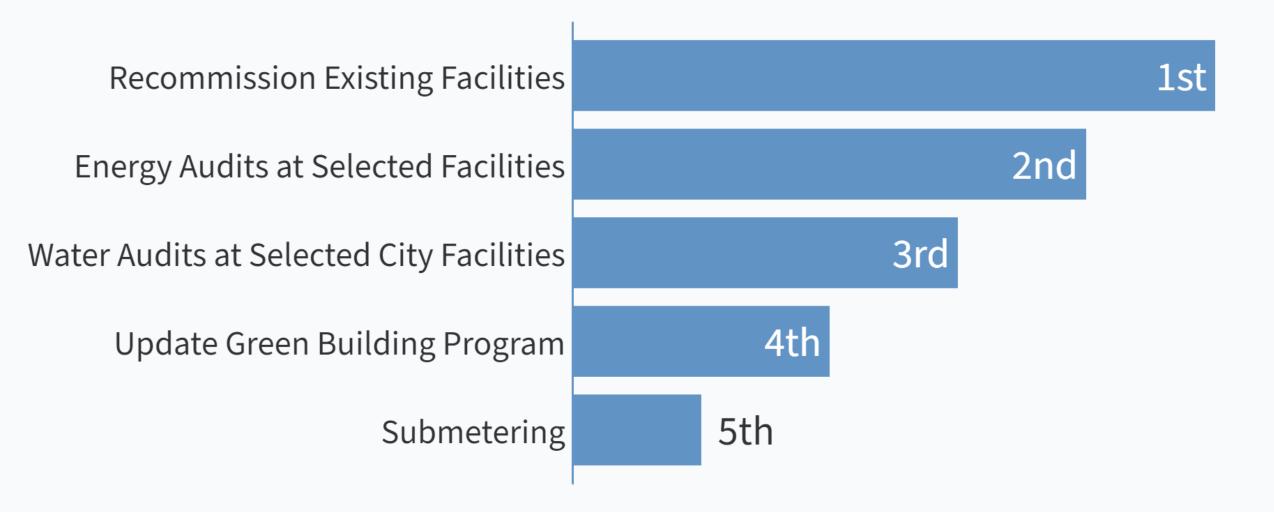
Submetering

Update Green Building Program

Water Audits at Selected City Facilities



Preliminary Resource Conservation Projects



Preliminary Materials Management Projects

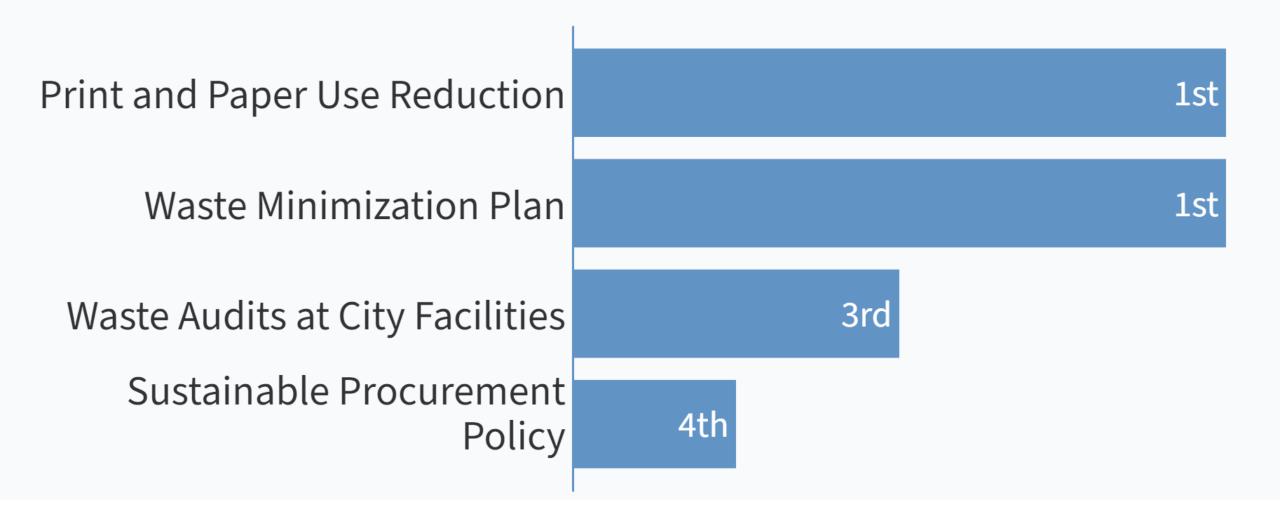
Print and Paper Use Reduction

Sustainable Procurement Policy

Waste Audits at City Facilities

Waste Minimization Plan

Preliminary Materials Management Projects



Preliminary Land Use and Transportation Projects

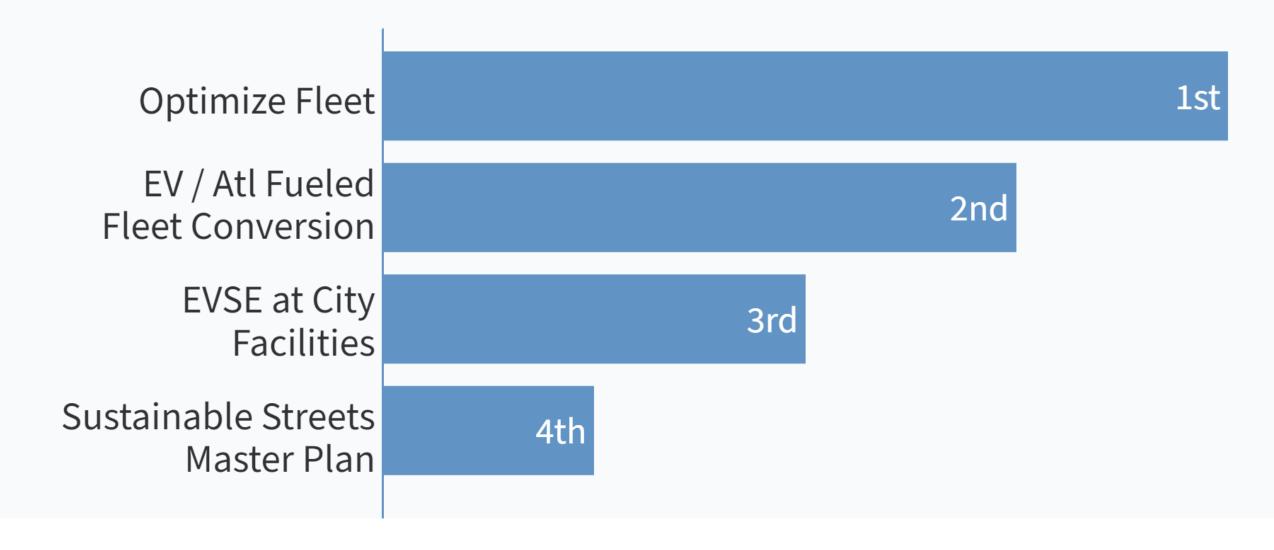
EV / Atl Fueled Fleet Conversion

EVSE at City Facilities

Optimize Fleet

Sustainable Streets Master Plan

Preliminary Land Use and Transportation Projects



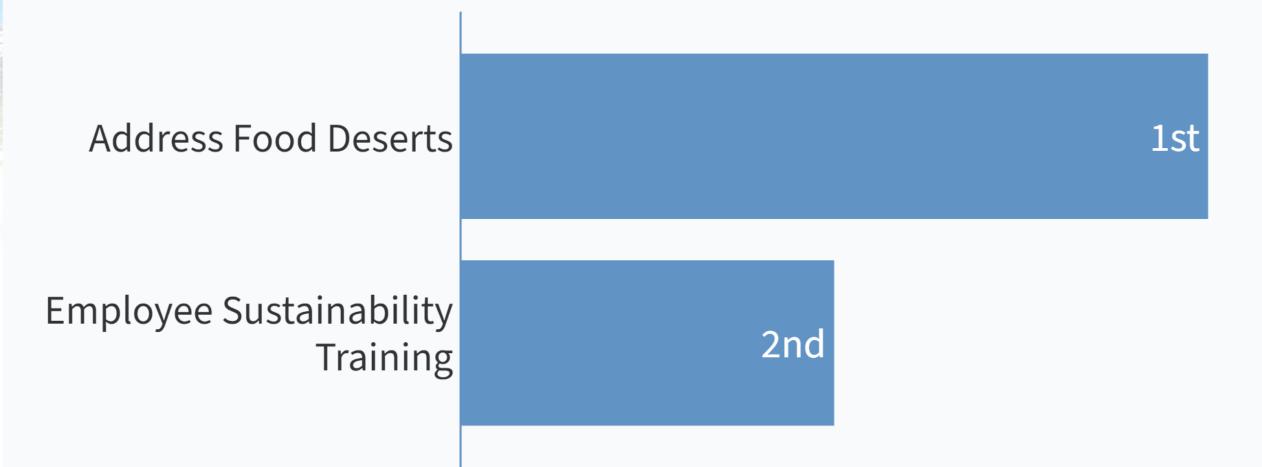
Preliminary Equity and Outreach Projects

Address Food Deserts

Employee Sustainability
Training



Preliminary Equity and Outreach Projects



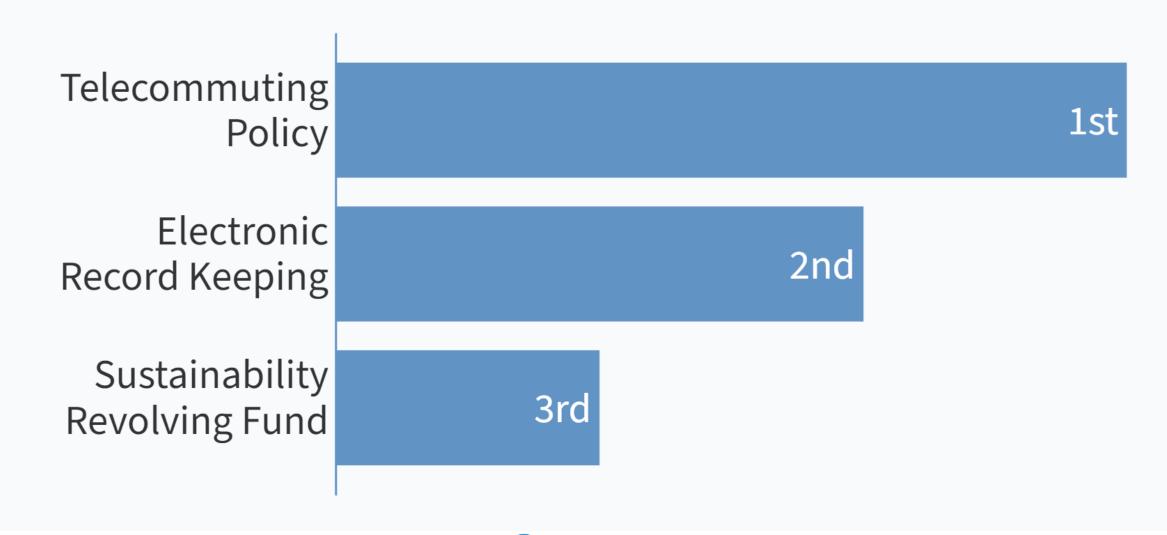
Preliminary Policy & Economics Projects

Sustainability Revolving Fund

Electronic Record Keeping

Telecommuting Policy

Preliminary Policy & Economics Projects



Are there any other sustainability projects we should consider?



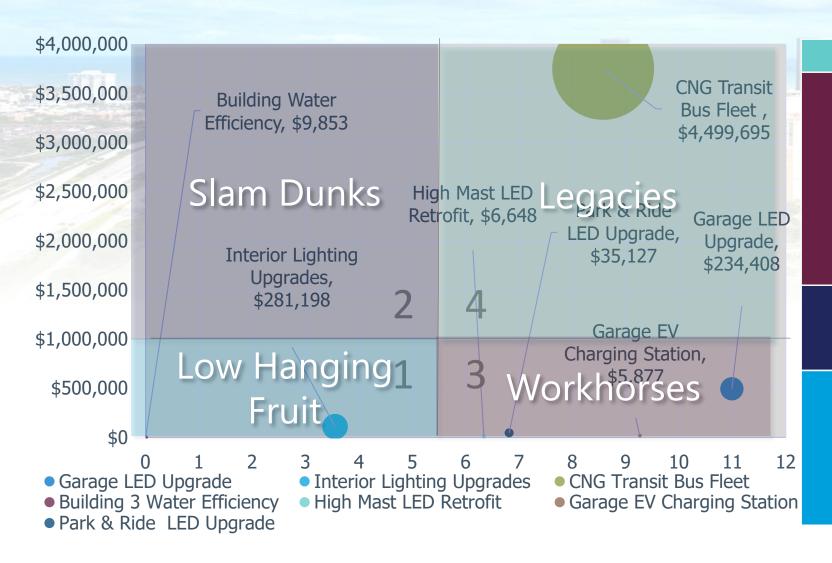
Other sustainability projects to consider

- Local circulator bus improved service and routes with goal to be that in-Pompano travel doesn't require a car
- Study of tree canopy coverage/increasing canopy
- Remove all printers from all departments
- Provide an incentive program for local businesses to participate in materials reduction/recycling
- Strengthen sustainability development codes
- Adopt design standards mandating adaptability
- Ensure all city facilities are properly recycling
- Provide temporary jobs for Pompano residents that do not have jobs

Life Cycle Costs and Benefits



Benefit Balance



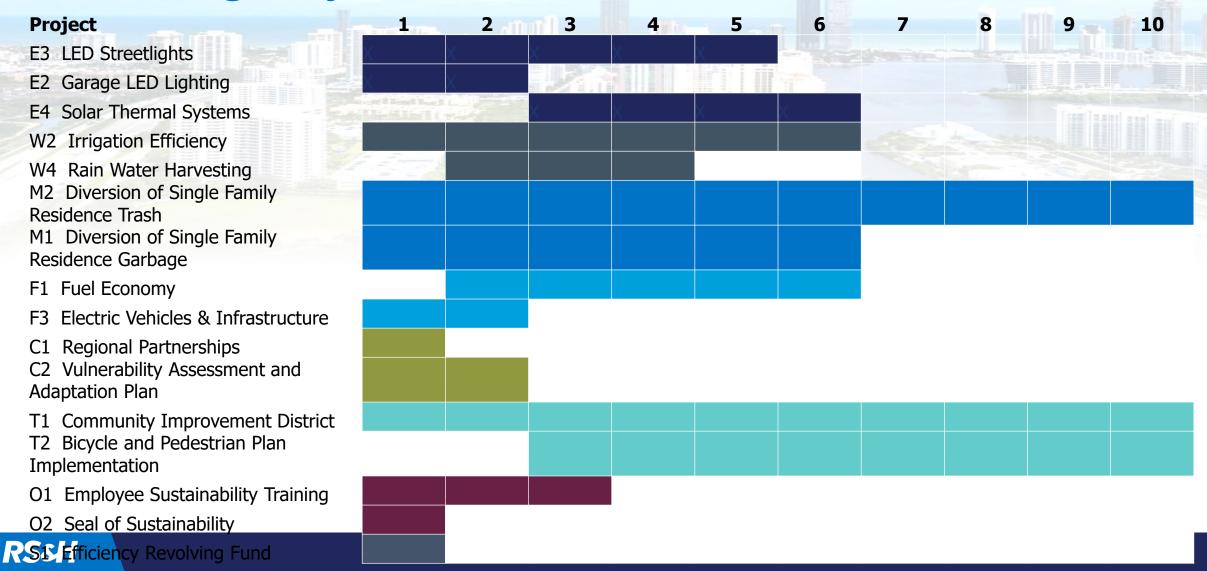
Legacies

Workhorses

Slam Dunks

Low-hanging Fruit

Scheduling Projects



Sustainable Project Management Plans

What
is the project?

What are its goals?

What will it achieve?

Who is responsible?

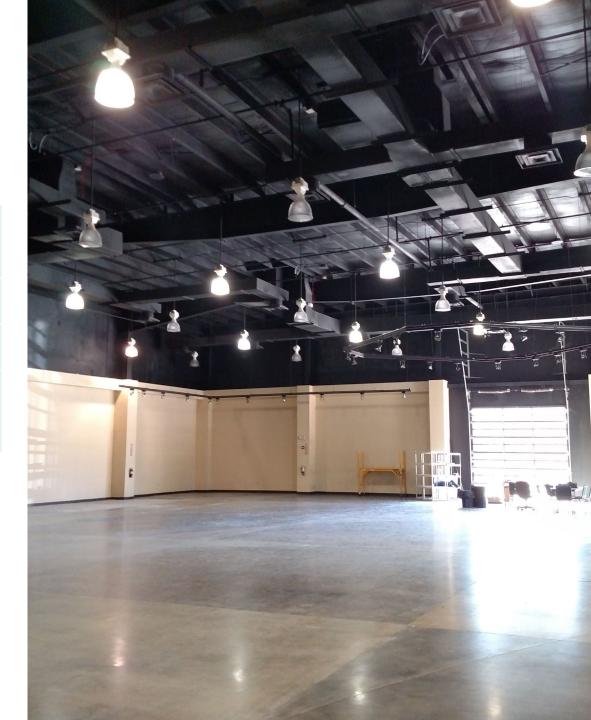
How much will it cost?

Is it worth it?

SMP EXAMPLE

Project Identification

Project Name	LED Lighting Retrofit
Focus Area	Facility Energy Use
Location	Armsdale Park-n-Ride
Year Established	2017





SMP Example: LED Lighting Retrofit

Project Description

a.Objective(s)	Reduce energy consumption, and maintenance requirements of interior lighting by replacing existing lamps and fixtures with light-emitting diode (LED)s.

b. Measure(s) Kilowatt-hours per square foot

c. Action(s)

Inventory existing fixtures. Specify LED luminaire(s) with similar aesthetics and performance. Develop scope of work. Determine delivery method. Procure materials / services. Evaluate.

d. Cost(s) / Benefit(s)

Costs are assumed to be \$47,000 based on vendor quotes. Installation occurs in years 1. Savings are assumed to occur for 12 years, though equipment life may be longer. Energy savings are based on comparisons between current and replacement fixture energy use and operating hours. Savings include avoided maintenance costs based on extended life of LED fixtures, materials costs sourced from RSMeans and a labor rate of \$53/hr. Benefits do not include commercial energy efficiency rebates that may be available from FPL.

SMP Example: LED Lighting RetrofitResponsibility

a.Lead Department / Division	Construction & Capital Programs
b. Project Manager	TBD

c. Assistant PM **TBD**

Goals

a.Reduce Electricity Use	20%
b. Base Year	2013
c. Base Value	6,810,000 kWh

Performance

a.Project Life	12 years
b. Project Discount Rate	2.5%
c. Economic Performance	114% ROI; \$35,127 Net Present Value; 6.8 Year Payback
d. Goal Performance	4%

SMP Example: LED Lighting Retrofit

2	Costs & Bend	efits											
	Year	1	2	3	4	5	6	7	8	9	10	Total	
		\$(47,000										\$(47,000	
	Investment)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0)	
	Existing Use	22,864	22,864	22,864	22,864	22,864	22,864	22,864	22,864	22,864	22,864	228,640	
	% Conserved	78%	78%	78%	78%	78%	78%	78%	78%	78%	78%	78%	
	Electricity												
	Svgs.	17,910	17,910	17,910	17,910	17,910	17,910	17,910	17,910	17,910	17,910	179,100	
	Resource Rate	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11	\$0.11		
	Avoided Costs	\$3,500	\$7,000	\$7,200	\$7,400	\$7,600	\$7,800	\$8,000	\$8,200	\$8,400	\$8,600	\$82,200	
		THE RESERVE AND ADDRESS OF THE PARTY OF THE											

Breakout Session

- » Step 1.
 - Each participant will be assigned a breakout group.
- » Step 2
 - Proceed to complete the sections of the worksheet for all fields in green.
 - Don't get stuck! Use best available information; indicate where further work is needed.



Next Steps: Working Groups

- « Two or Three 1.5 hour teleconferences over the next 6-8 weeks
- « Provide input on:
 - Project costs
 - Benefits
 - Implementation plans

Questions?





City of Pompano Beach Sustainability Project Portfolio Collaboration Meeting Meeting Minutes

Meeting Date: March 9, 2022, 1:30 – 4:30 PM EST

Meeting Place: Virtual

Participants: Jean Dolan, David Recor, Jennifer Gomez, Brian Donovan; Earl Bosworth;

Suzette Sibble, John Sfiropoulos, Horacio Danovich, Tammy Good, Randy Brown, Michael Taylor, Molly Thistle, Whitney Walsh, Robert McCaughan, George Buenaventura, Forrest Hall, Kathryn McBryde, Steve Rocco, Russell Ketchem, Beth Dubow, Erjeta Diamonti, Bobby Bush, Carla Byrd, Michael Rada, Gene Zamoski, Mario Sotolongo, Nguyen Tran, Mark Beaudreau, Chris Clemens, Pete McGinnis, Kimberly Spill-Cristiano, Alex Goldstein

RS&H: Nathan Stinnette (NLS), Rikki Scantlan (RAS), Ben Moore (BJM)

Meeting Minutes:

Overview

- The Collaboration meeting consisted of a presentation detailing RS&H's previous sustainability work with the City, the City's sustainability work plan, the sustainability vision and focus areas, and an overview of the City's sustainability baseline. It also included a discussion of the City's sustainability goals, the concept of backcasting, and how projects contribute to meeting goals. Following a break, the facilitators introduced prioritizes project ideas to the attendees and used an online polling software to get their feedback on the proposed ideas. Finally, participants were introduced to the process of developing individualized project sustainability management plans (SMPs) and were given the opportunity to try developing plans themselves in a half-hour breakout session conducted using Mural, an online whiteboard software platform.
- The Murals completed during the breakout sessions capture participant work and feedback on the selected project ideas:



Climate & Resilience and Resource Conservation Mural:

https://app.mural.co/invitation/mural/rsandh8800/1646762861157?sender=ued6001e2fd34d0f107614818&key=c8fa0054-95e6-4404-8ce0-10b3659648d9

• Land Use & Transportation and Equity & Outreach Mural:

https://app.mural.co/invitation/mural/rsandh8800/1646771152154?sender=ued6001e2fd34d0f107614818&key=0e589c1b-a347-4d7d-b1df-f270f56f526f

Materials Management and Policy & Economics Mural:

https://app.mural.co/invitation/mural/rsandh8800/1646771197675?sender=ued6001e2fd34d0f107614818&key=968f4a9a-3107-499f-906d-0d0760d6c97f

Meeting notes / debriefing session notes

Climate & Resilience and Resource Conservation Group (Facilitator: Nathan Stinnette)

- Gene Zamoski stressed the need for proper training for all employees, so they understand why the City needs to implement the sustainability initiatives
- Jean Dolan suggested the connector bus needs to be addressed with improved routes and better public outreach so more people know about it
- Gene Zamowski supports the print reduction initiative -= he is ready top remove printers right away

Materials Management and Policy & Economics Group (Facilitator: Rikki Scantlan)

- Chris Clemmons Economic Development Manager had reservations about SPP
- Carla Byrd is very supportive of the Sustainable Purchasing Plan
- Jean Dolan has strong feelings about CoPB's vision statement; she doesn't like it because it is:
 - Not aspirational enough
 - Too long
- Mention jean's feelings regarding the vision statement to Max Wemyss
- Jennifer, Jean and Carla were very supportive of the Sustainable Procurement Policy
 - The first step would be to decide what products, materials, and vendors could be included
 - o Jennifer wanted to include vehicle purchases in it
 - Materials, vehicle purchases, and vendors
 - Vendors procure projects through RFPs
- Jean said they might want to hire a consultant to develop a purchasing policy

Land Use & Transportation and Equity & Outreach Group (Facilitator: Ben Moore)

Only 3 or 4 people were present. Some did not attend



- Pete McGinnis, Fire Marshal mentioned electric fire trucks with diesel on the road but battery power when it arrives
 - o Very expensive
 - o BJM has talked to Forrest Hall, Fleet Manager before. Fleet Manager is open to fleet optimization / EV initiatives, but doesn't have control over purchases
 - Purchasing is decentralized by departments
- BJM wants to get a better polling software
 - o Suggest he talk to Melissa Stewart about that and Mural

Follow Up Discussion

- Follow up calls BJM, RAS, and NLS to lead same Working Groups
- Carson Murphy to support with research and filling out worksheets
 - Look at JTA for worksheet
 - Show to BJM

CITY OF POMPANO BEACH SUSTAINABILITY PROJECT PORTFOLIO COLLABORATION MEETING INVITEES

Meeting Date: March 9, 2022, 1:30 – 4:30 PM EST

Meeting Place: Virtual

NAME	ROLE	EMAIL	PHONE
Nathan Stinnette	Sustainability Specialist	Nathan.stinnette@rsandh.com	904-256-2436
Rikki Scantlan	Environmental Specialist	Rikki.scantlan@rsandh.com	210-301-4836
Ben Moore	Sustainability Leader	Ben.moore@rsandh.com	954-236-7379
Jean Dolan	Principal Planner	<u>Jean.dolan@copbfl.com</u>	954-786-4045
David Recor	Development Services	David.Recor@copbfl.com	954-786-4664
	Director		
Jennifer Gomez	Asst Development Services	Jennifer.Gomez@copbfl.com	954-786-4640
	Dir		
Brian Donovan; Earl	Assistant City Manager	Brian.Donovan@copbfl.com;	954-786-4612
Bosworth; Suzette Sibble		Earl.Bosworth@copbfl.com;	
		Suzette.Sibble@copbfl.com	
John Sfiropoulos	City Engineer	John.sfiropoulos@copbfl.com	954-545-7009
Horacio Danovich	GO Bond / Innovation District	Horacio.danovich@copbfl.com	954-786-7834
Tammy Good	CIP Manager	Tammy.good@copbfl.com	954-786-5512
Randy Brown	Utilities Director	Randolph.brown@copbfl.com	954-545-7044

Michael Taylor	Stormwater Supervisor	Michael.Taylor@copbfl.com	954-786-4724
Molly Thistle	Reuse Outreach and Water Conservation	Molly.thistle@copbfl.com	954-545-7015
Whitney Walsh	Utility Billing Manager	whitney.walsh@copbfl.com	954.786.4637
Robert McCaughan	Public Works Director	Robert.McCaughan@copbfl.com	954-786-4097
George Buenaventura	Facilities Maint Oper Director	George.Buenaventura@copbfl.com	954-786-4108
Forrest Hall	Fleet Manager	Forrest.hall@copbfl.com	954-786-4033
Kathryn McBryde	Vehicle Service Office Assistant	Kathryn.McBryde@copbfl.com	954-786-4109
Steve Rocco	Air Park Manager	Steve.Rocco@copbfl.com	954-786-4129
Russell Ketchem	Solid Waste Operations Manager	Russell.Ketchem@copbfl.com	954-545-7011
Beth Dubow	Recycling Specialist	Beth.Dubow@copbfl.com	954-545-7047
Erjeta Diamonti	Budget Manager	Erjeta.Diamanti@copbfl.com	954-786-4065
Bobby Bush	Senior Human Resources Analyst	Bobby.Bush@copbfl.com	954-786-4698
Carla Byrd	General Services Director	Carla.Byrd@copbfl.com	954-786-4167
Michael Rada	Building Official	Michael.Rada@copbfl.com	954-545-7774
Gene Zamoski	Chief Information Officer	Eugene.Zamoski@copbfl.com	954-786-4537
Mario Sotolongo	Code Compliance Director	Mario.Sotolongo@copbfl.com	954-786-7870

Nguyen Tran	Community Redevelopement Agency Director	Nguyen.Tran@copbfl.com	954-545-7769
Mark Beaudreau	Recreation Programs Admin	Mark.Beaudreau@copbfl.com	954-786-4184
Chris Clemens	Economic Development Manager	Chris.Clemens@copbfl.com	954-786-4048
Pete McGinnis	Fire Marshal	Peter.McGinnis@copbfl.com	954-786-4719
Kimberly Spill-Cristiano	Emergency Manager	Kimberly.Spill- Cristiano@copbfl.com	954-545-7799
Alex Goldstein	Program Compliance Manager	Alexander.Goldstein@copbfl.com	954-786-4641

Fleet conversions to fuel efficient & electric vehicles. Consider making EV / Hybrid / All fuel vehicles the default and require City departments to justify and receive approval for purchase of ICE vehicles.

This is a textbex...

Climate Resilience and Resource Conservation Group.

INITIATIVE SCORECARD WORKSHEET

PROJECT IDENTIFICATION:

Project Name: City-owned Solar PV array

Focus Area: Climate Resilience

Location: Airport

Year Established: FY23

PROJECT DESCRIPTION:

Objective(s) Measures(s)

Action(s)
Cost(s) / Benefit(s)
Funding

Objective(s): Provide renewable power for peak shaving at WTP, fire station, airpark and golf course.

Measure(s): electricity output kWh, percentage of demand
Feasibility study to determine demand & project details (i.e.
Action(s): are batteries needed?). Determine ROM costs/payback.
Develop an RFP. Select vendor and move forward.

Cost(s)/Benefit(s)Develop impl. & O&M & end of life costs. Include

transmission infrastructure cost. High costs. Economic,

Funding:

political, outreach, carbon reduction.

Possibly use SRF and schedule later? Utilities need proceeds (ROI) to come back to them. Possibly IIJA grantrs or other federal funding..

RESPONSIBILITY:

Lead Department / Division: Engineering / CIP

Project Manager: TBD

Assistant PM: TRD

GOALS:

Climate Action: Reduce GHG emissions to net-zero by 2050

Renewable Energy: Achieve 100% renewable energy supply for City operations

Focus Area Goal: by 205

Goals:

Water Use: Reduce potable water use by 40% from 2019 baseline by 2050

Electricity Consumption: Reduce electricity consumption for City operations by 45% by 2050

PERFORMANCE:

Project Life:

Project Discount Rate:

Economic Performance (Low Hanging Fruit,
Slam Dunk, Workhorse, Legacy):

Goal Performance: (Low, Med, High)

Low

COST AND BENEFITS:

Costs:

What are they? Are there incentives and rebates available to reduce costs? How can they be estimated? Do they occur all in one year, or will they occur at different times? Will inflation affect future costs?

This is a textbox...

Benefits:

What are they? Do benefits from avoided costs? Is revenue available? How can benefits be estimated? Are there benefits that cannot be estimated? Is the benefit the same every year? Or do benefits change as time goes on? When do benefits end? Will inflation affect future benefits?

This is a textbox...

Solar Field between Dixie Highway and 5th Avenue.

Objective(s): What do we want the project to achieve?

Measure(s): How will we measure the project

FAA will

use of land if

Develop cost-effective and / or strategic projects

for facility / infrastructure scale Solar PV projects

on City-owned property. One option may be a

performance?
Action(s): What steps do we need to take to make the project happen?

Cost(s): How much will the project cost?
Benefit(s): What benefits will it have? They could be economic, social, or environmental, or resilience benefits.

Funding: General Fund, grants, P3?

Waste Diversion: Achieve a 75% LGO and community diversion rate

Materials Management:100% of all City purchases meet sustainable purchasing criteria under the City's Sustainable Procurement Policy by 2052

Paperless Policy:75% reduction in paper use realized under the terms of the Policy by 2050

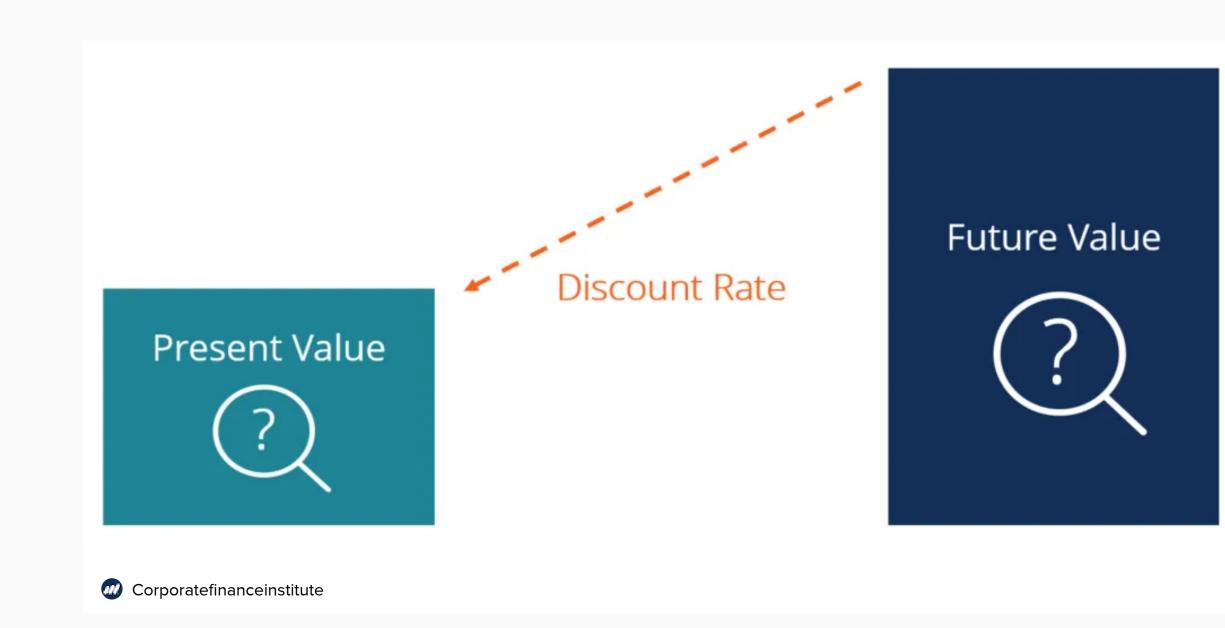
Fleet: Transition 100% of City's fleet vehicles to non-fossil fuel sources or electricity by 2050

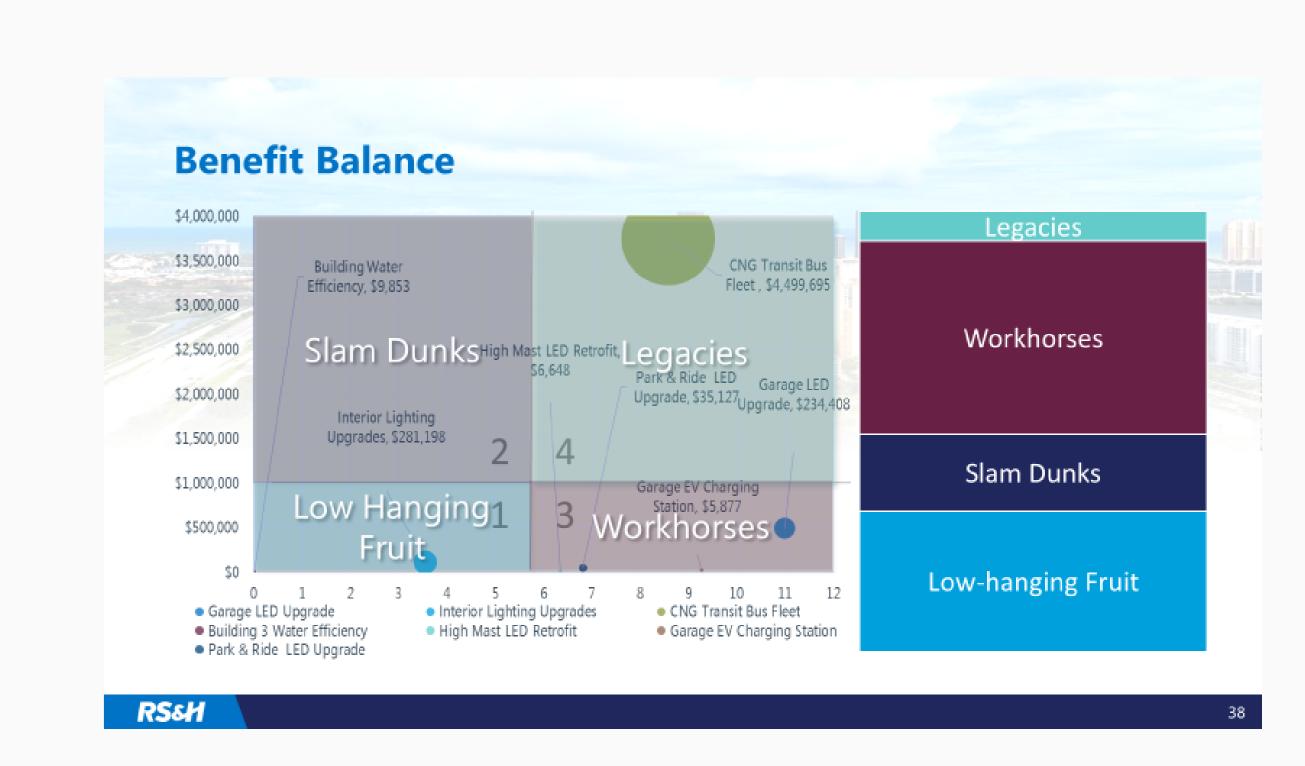
Green Building:50% of new construction and major renovations shall meet updated Green Building Program standards by 2050

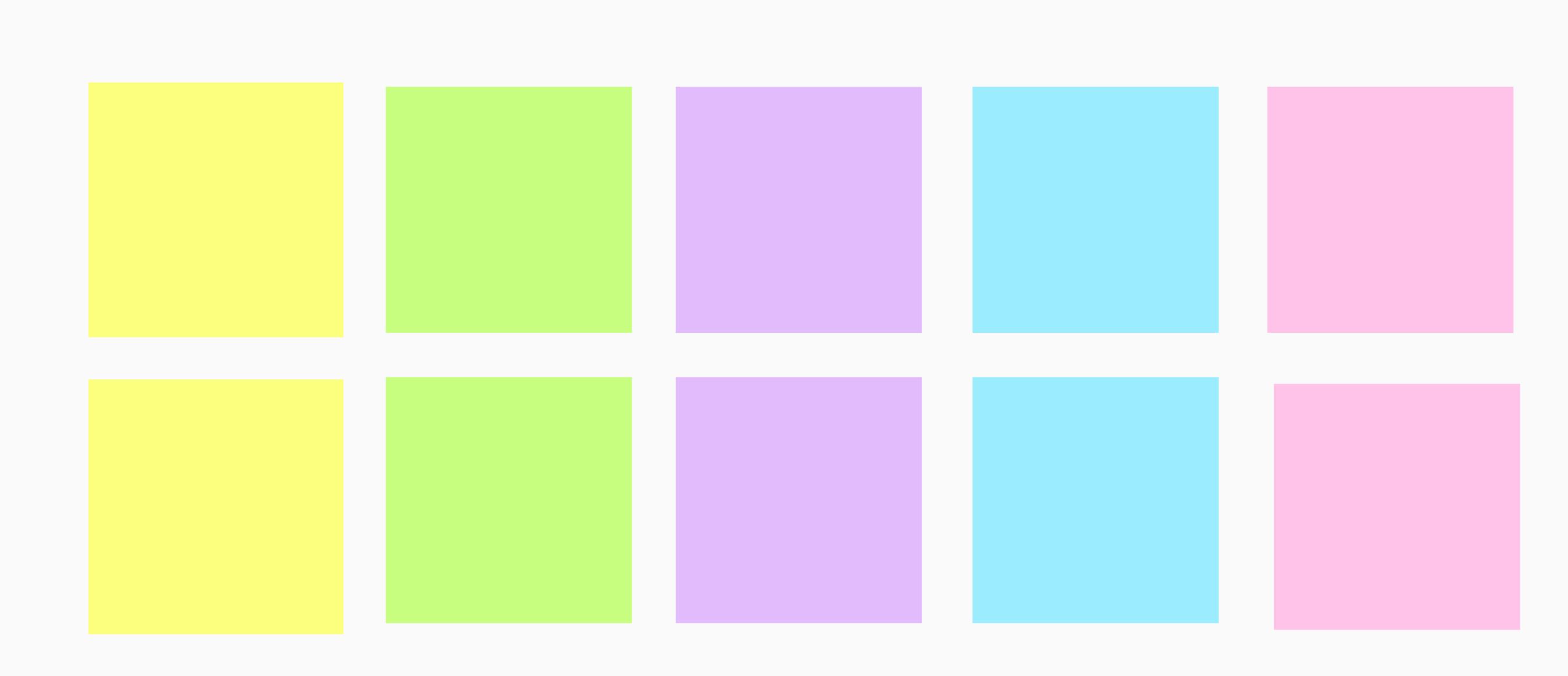
Multi-modal Transportation: Achieve a balanced transportation system with no single mode accounting for more than 30% of trips by 2050

Equity & Outreach: Develop an outreach and communications plan for the City's sustainability program by 2025 that addresses both City employees and community members. By 2050, at least 75% of community members will be aware of an engaged with the sustainability program.

Policy & Economics: Establish a sustainability revolving fund (SRF) by 2025 and fund selected sustainability initiatives. By 2050, at least 50% of sustainability projects will be funded by the SRF.







This is a textbex...

Materials Management and Policy & Economics Group.

INITIATIVE SCORECARD WORKSHEET

PROJECT IDENTIFICATION:

Project Name: Sustainable Procurement Policy Materials Management / Policy & Economics Focus Area: Location: This is a textbox... Year Established: This is a textbox..

PROJECT DESCRIPTION:

Objective(s) Measures(s) Action(s) Cost(s) / Benefit(s) Funding

Cost savings; best environmental statements; reduced waste; reused materials; local materials; local manufacturing; Objective(s): local businesses Life cycle cost/reduced consumption (define what we are Measure(s): reducing consumption of); functionality; how soon we want to achieve the changes Action(s): Research on sustainable procurement, output, materials. Definition of the project; how soon we want to achieve vendor o Funding: This is a text box...

RESPONSIBILITY:

Lead Department / Division: Project Manager: Assistant PM:

Procurement Carla This is a textbox...

Focus Area Goal:

GOALS:

Materials Management:100% of all City purchases meet sustainable purchasing criteria under the City's Sustainable Procurement Policy by 2052

other departments

PERFORMANCE:

Project Life:

Project Discount Rate:

Economic Performance (Low Hanging Fruit, Slam Dunk, Workhorse, Legacy): Goal Performance: (Low, Med, High)

2050

Low Hanging Fruit

This is a textbox...

COST AND BENEFITS:

Costs:

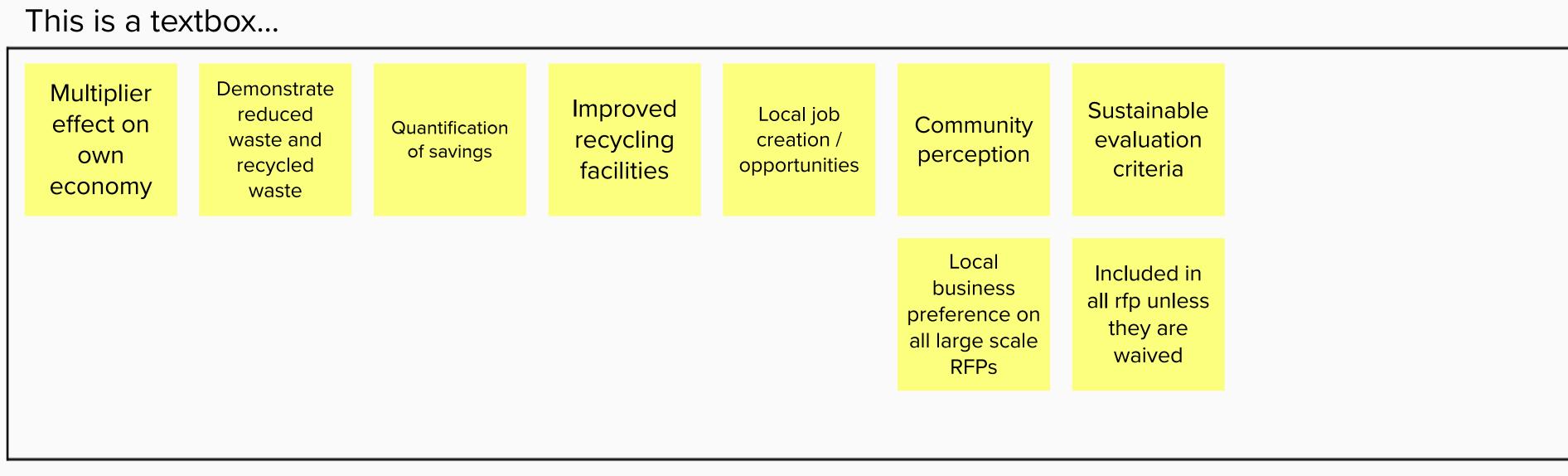
What are they? Are there incentives and rebates available to reduce costs? How can they be estimated? Do they occur all in one year, or will they occur at different times? Will inflation affect future costs?

This is a textbox...

Risk to project budgets	New technologies	Cybersecurity risk and data protection	Vulnerability of the vendor	Supply chain	Functionality	Ethical? Conflict of interest?
Cost associated with research and time	Time and investments could cause a shift in responsibility	May need to hire a consultant to develop	Outreach	Tracking	Create a list of types of purchases they make	

Benefits:

What are they? Do benefits from avoided costs? Is revenue available? How can benefits be estimated? Are there benefits that cannot be estimated? Is the benefit the same every year? Or do benefits change as time goes on? When do benefits end? Will inflation affect future benefits?



Develop and implement a protocol for comprehensive sustainable procurement, including design and construction standards, and track performance of qualifying purchases and services.

Objective(s): What do we want the project to

Measure(s): How will we measure the project

performance? Action(s): What steps do we need to take to make

the project happen?

Cost(s): How much will the project cost? Benefit(s): What benefits will it have? They could be economic, social, or environmental, or resilience benefits.

Funding: General Fund, grants, P3?

Goals:

Climate Action: Reduce GHG emissions to net-zero by 2050

Water Use: Reduce potable water use by 40% from 2019 baseline by 2050

Electricity Consumption: Reduce electricity consumption for City operations by 45% by 2050

Renewable Energy: Achieve 100% renewable energy supply for City operations by 2050

Waste Diversion: Achieve a 75% LGO and community diversion rate

Paperless Policy:75% reduction in paper use realized under the terms of the Policy by 2050

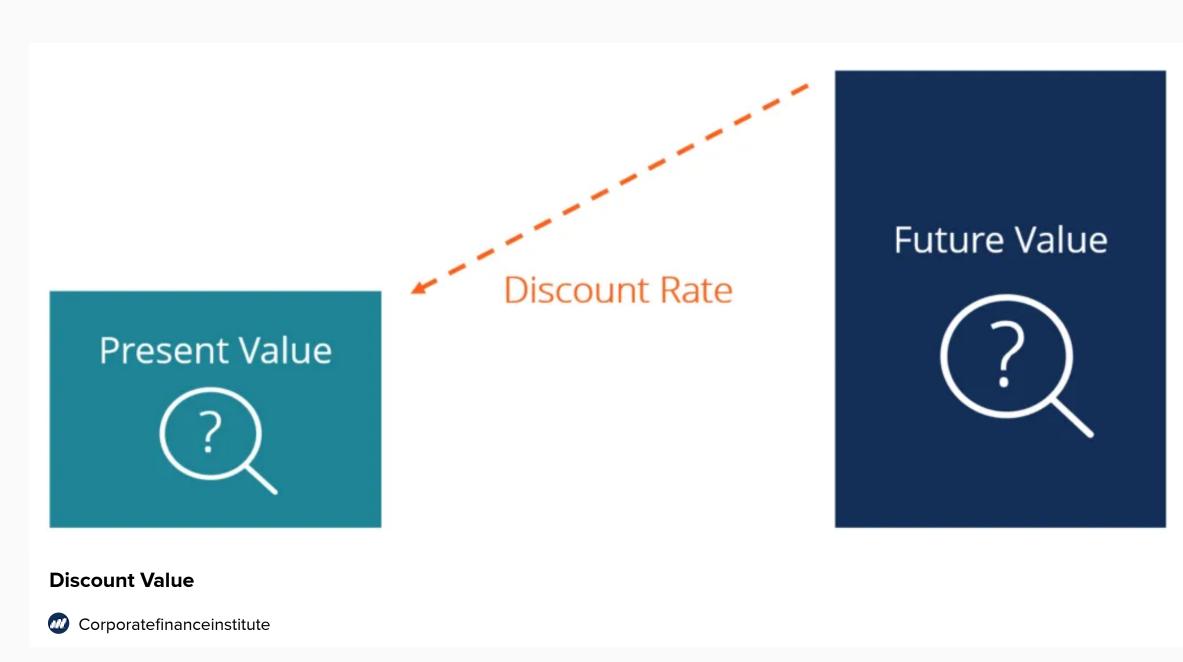
Fleet: Transition 100% of City's fleet vehicles to non-fossil fuel sources or electricity by 2050

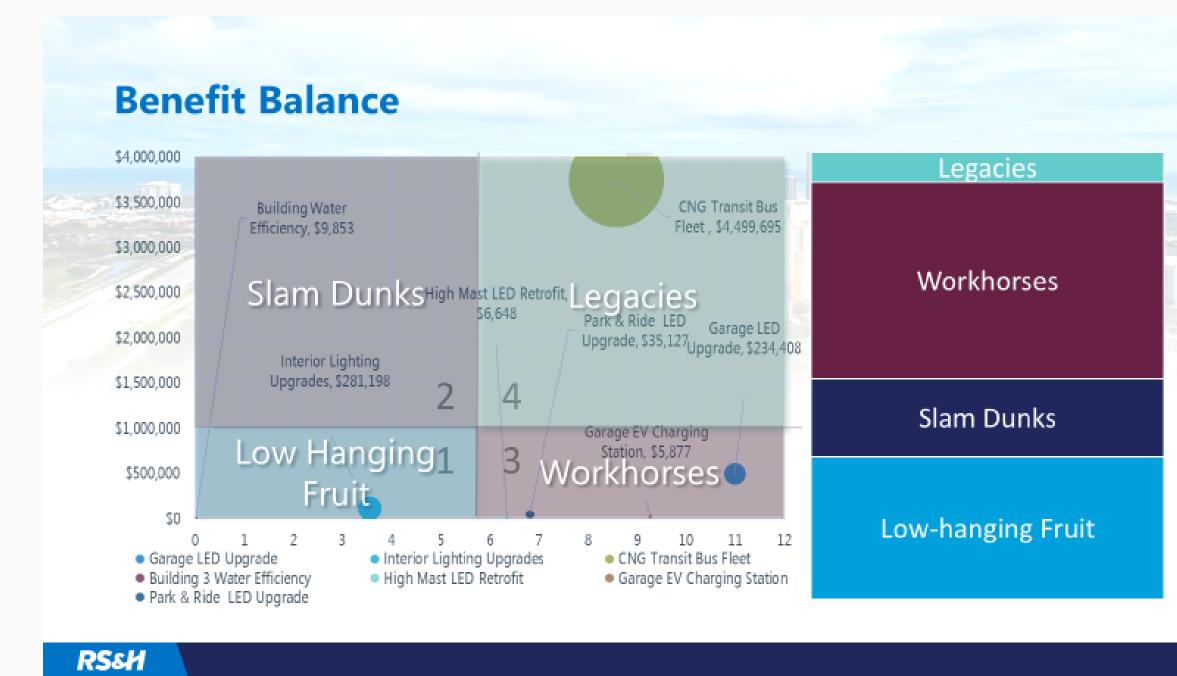
Green Building:50% of new construction and major renovations shall meet updated Green Building Program standards by 2050

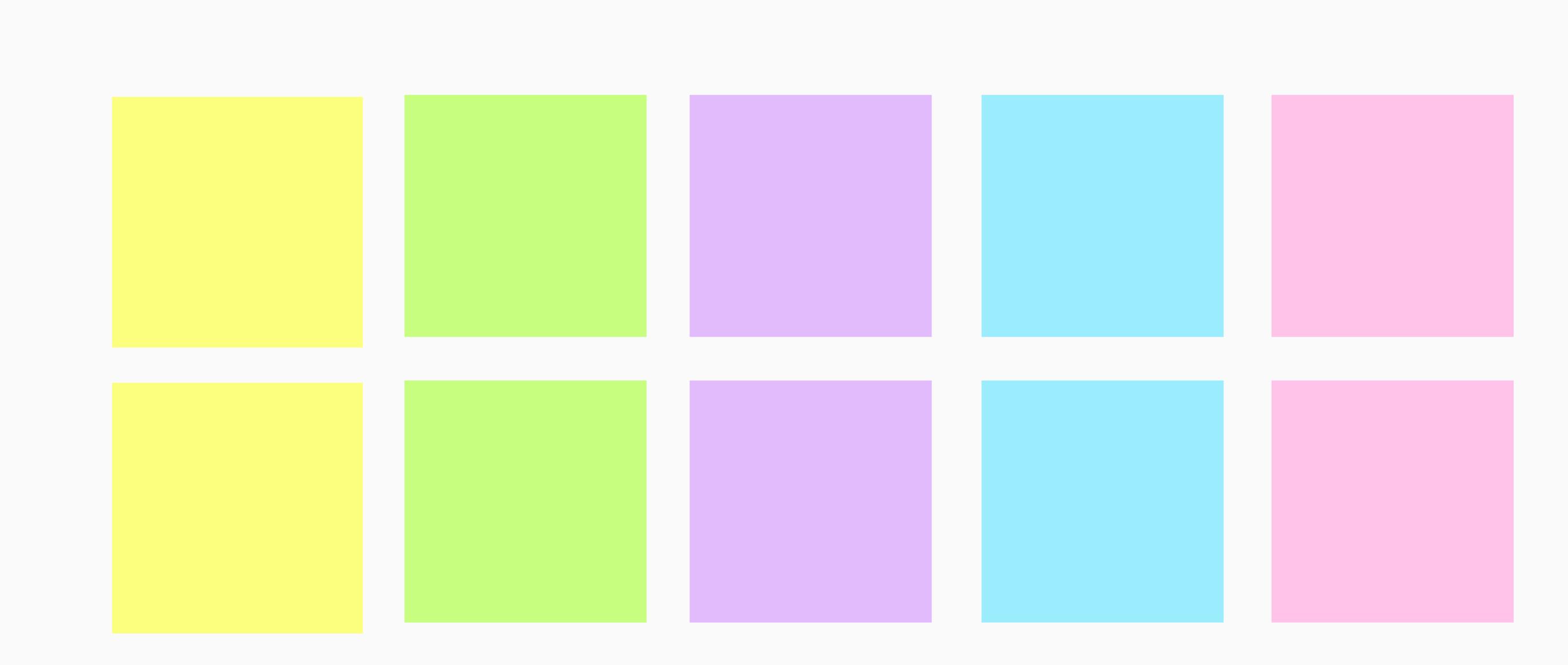
Multi-modal Transportation: Achieve a balanced transportation system with no single mode accounting for more than 30% of trips by 2050

Equity & Outreach: Develop an outreach and communications plan for the City's sustainability program by 2025 that addresses both City employees and community members. By 2050, at least 75% of community members will be aware of an engaged with the sustainability program.

Policy & Economics: Establish a sustainability revolving fund (SRF) by 2025 and fund selected sustainability initiatives. By 2050, at least 50% of sustainability projects will be funded by the SRF.







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Land Use & Transportation and Equity & Outreach Group.

INITIATIVE SCORECARD WORKSHEET

PROJECT IDENTIFICATION:

EV / Alt Fueled Fleet Conversion: Project Name: Focus Area: Land Use & Transportation Location: Multiple Locations Year Established: FY2024 (October 2023)

PROJECT DESCRIPTION:

Objective(s) Measures(s) Action(s) Cost(s) / Benefit(s) Funding

Reduce gas/diesel fuel use, reduce GHG emissions, reduce fuel expenditure, right sizing the fleet Measure(s): % of fleet, fuel expenditure, Inventory current fleet including location, specify type, identify Action(s): fueling infrastructure requirements, understand resilience need\$, insert projects in to budget, establish a procurement policy Cost(s)/Benefit(s) This is a text box... Funding: This is a text box...

RESPONSIBILITY:

City Managers Office, Fleet Management Lead Department / Division: Project Manager: Forrest Hall, Brian Donovan Assistant PM: This is a texthox Climate Action: Reduce GHG emissions to net-zero by 2050 **GOALS**: Fleet: Transition 100% of City's fleet vehicles to non-fossil fuel sources or electricity by 2050 Focus Area Goal: Base Year: This is a textbox... Base Value:

PERFORMANCE:

10-15 years Project Life: This is a textbox... Project Discount Rate: Economic Performance (Low Hanging Fruit, Aspects of low-hanging fruit and legacy Slam Dunk, Workhorse, Legacy): Goal Performance: (Low, Med, High)

This is a textbox...

COST AND BENEFITS:

Costs:

What are they? Are there incentives and rebates available to reduce costs? How can they be estimated? Do they occur all in one year, or will they occur at different times? Will inflation affect future costs?

Upfront cost vehicles (certain vehicles it will be higher than other, e.g., heavy duty vehicles), fueling infrastructure, fueling infrastructure resilience, maintenance. Vendor quotes, state contracts, lease terms / options Costs will spread over several years as vehicles are incorporated into the fleet

What are they? Do benefits from avoided costs? Is revenue available? How can benefits be estimated? Are there benefits that cannot be estimated? Is the benefit the same every year? Or do benefits change as time goes on? When do benefits end? Will inflation affect future benefits?

Fuel savings (depending on fuel type), fuel cost savings, maintenance savings, infrastructure maintenance (possibly) CO2 savings, pollution prevention benefits Public perception Change employee behavior

Fleet conversions to fuel efficient & electric vehicles. Consider making EV / Hybrid / All fuel vehicles the default and require City departments to justify and receive approval for purchase of ICE vehicles.

Objective(s): What do we want the project to achieve?

Measure(s): How will we measure the project performance?

Action(s): What steps do we need to take to make the project happen?

Cost(s): How much will the project cost? Benefit(s): What benefits will it have? They could be economic, social, or environmental, or resilience benefits.

Funding: General Fund, grants, P3?

Goals:

Water Use: Reduce potable water use by 40% from 2019 baseline by 2050

Electricity Consumption: Reduce electricity consumption for City operations by 45% by 2050

Renewable Energy: Achieve 100% renewable energy supply for City operations by 2050

Waste Diversion: Achieve a 75% LGO and community diversion rate

Materials Management:100% of all City purchases meet sustainable purchasing criteria under the City's Sustainable Procurement Policy by 2052

Paperless Policy:75% reduction in paper use realized under the terms of the Policy by 2050

Green Building:50% of new construction and major renovations shall meet updated Green Building Program standards by 2050

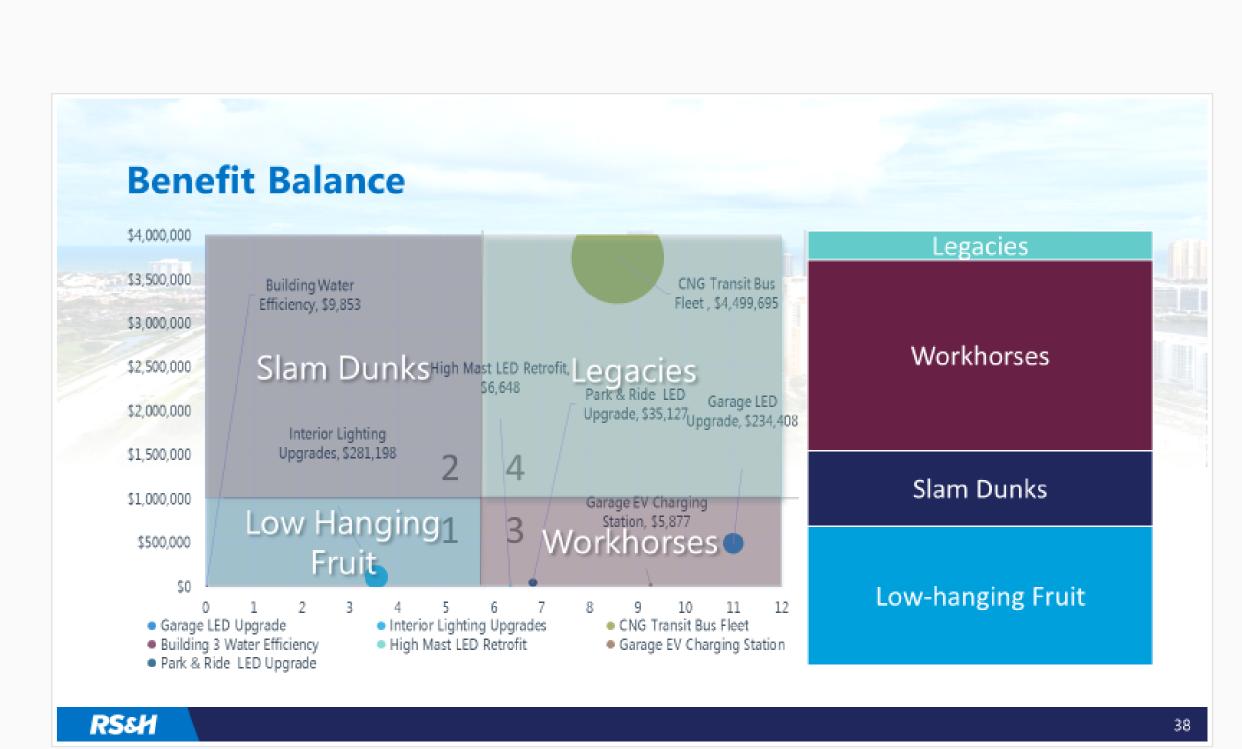
Multi-modal Transportation: Achieve a balanced transportation system with no single mode accounting for more than 30% of trips by 2050

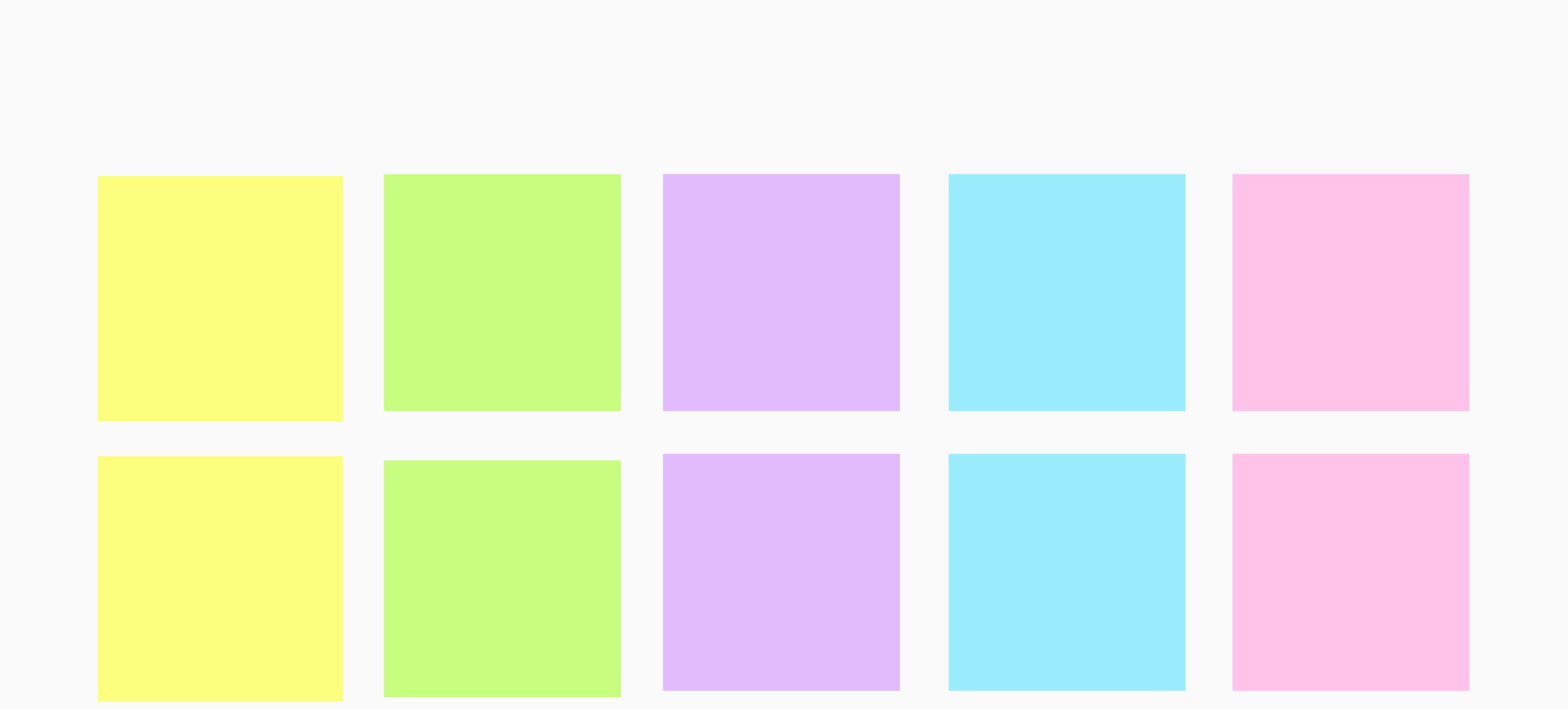
Equity & Outreach: Develop an outreach and communications plan for the City's sustainability program by 2025 that addresses both City employees and community members. By 2050, at least 75% of community members will be aware of an engaged with the sustainability program.

Policy & Economics: Establish a sustainability revolving fund (SRF) by 2025 and fund selected sustainability initiatives. By 2050, at least 50% of sustainability projects will be funded by the SRF.



Corporatefinanceinstitute





APPENDIX C: AGENDA AND MINUTES FROM WORKING GROUP MEETINGS



City of Pompano Beach Sustainability Project Portfolio – Materials Management and Policy & Economics Outreach Group

MEETING AGENDA:

Meeting Date: Monday, April 11; 3-4PM

Meeting Place: Virtual:

https://rsandh.zoom.us/j/97030381038?pwd=U1kwanNXMmluMEt6VkQvNzNBWFl

RQT09

Participants: Jean Dolan, David Recor, Jennifer Gomez, Brian Donovan, Earl Bosworth, Suzette

Sibble, Russell Ketchem, Beth Dubow, Erjeta Diamanti, Carla Byrd, Chris Clemens,

Alex Goldstein

Subject: Sustainability Project Portfolio Project Ideas

1. Introductions

- 2. Project Overview [OBJECTIVE: Brief participants about the SPP project]
 - 2.1. Baseline
 - 2.2. Benchmarking
 - 2.3. Goals
 - Paperless Policy
 - Waste Diversion
 - Materials Management
- **3.** Materials Management and Policy & Economics Sustainability Opportunities [OBJECTIVE: Get the perspective of the working group about sustainable project ideas.]
 - 3.1. Projects
 - Print and Paper Use Reduction
 - Sustainable Procurement Policy
 - Waste Audits at City Facilities
 - Waste Minimization Plan
 - Sustainability Revolving Fund
 - Electronic Record Keeping
 - Telecommuting Policy
- **4. Action Items / Next Steps** [OBJECTIVE: Identify action items / next steps for follow up]
- 5. Adjourn

Compiled By: Nathan Stinnette (904) 256-2436



City of Pompano Beach Sustainability Project Portfolio – Materials Management and Policy & Economics Outreach Group

Meeting Minutes

Meeting Date: April 11, 2022, 3 – 4PM

Meeting Place: Virtual

Participants: Max Wemyss (MW), Jean Dolan (JD), Alexander Goldstein (AG), Beth Dubow

(BD), Jennifer Gomez (JG)

RS&H: Nathan Stinnette (NS), Rikki Scantlan (RS)

Meeting Minutes:

Print and Paper Use Reduction

- There are legal barriers to paper reduction
- Should it start at one or should it go to all departments?
 - O JD: All departments. Do we know what departments are using paper still?
 - NS: We did not look into paper purchasing as part of the baseline but we need to look at that.
 - MW: Development services may use the most?
 - NS: Who do we need to talk to about purchasing paper?
 - Each department has secretaries who order paper
 - Need to know the number of printers
 - Need to speak to department head secretaries. MW will check with IT too
 - NS: Are printers contracted out?
 - JD: Big printers are contracted out; smaller personal printers are theirs
 - Should be able to get data from the company that does that
 - Martha will know who the company is for development services
 - o JD uses CDW
 - Max to talk to Jean about the contract for printers and follow up
 - JD: Personal printers are like Dell; big printers are Toshiba
 - Do they have plotters?
 - Yes, they do in engineering. Land use plans are not usually printed in development anymore
 - JD: They have the option to choose how to print. Duplex is set as the default and it needs to be turned off



- Are you using recycled content paper?
 - MW: Need to request from secretary at time of purchase
 - JD: Recycled paper more expensive or not available
- Inspections and mailings for notices require paper mailings

Objectives

- JD: Bring awareness to printing necessities
 - Need an educational aspect to this
- Are you still accepting and distributing paper?
 - Decisions are made at the department level
 - RFPs/RFQs are no longer made to be paper
 - JG: HR has a large collection of paper. All application intakes are huge
 - Performance evaluations are on paper
 - NS: Do you feel there has been a paper use shift since pandemic?
 - MW: There has been less printing because they did not have access to their printer in the office
 - Generally, there is not much paper interaction
 - Paper interaction has increased since coming back to the office
 - JG: Would have needed to be back in city hall for printing
 - JD: Statewide paper mailing requirements may prohibit reductions for notifications
 - Same paper source
 - Same printers used
 - JG: Parks and recreation and public affairs do not have a desire to change their way of advertisements
 - NS: Printed in house or outside print services?
 - Both
 - Should we look at outside of print services?
 - JD: In house. Outside printing may have different requirements
 - MW: Changed program to shift away from paper distribution to electronic distributing. Waiting to see how FEMA accepts that.
 - JG: Water bills are a major paper use
 - Can residents get it electronically?
 - JD: Yes, they can select the electronic-only option

Actions

- NS: There needs to be a policy across all departments at the city level
 - What are the barriers to make that happen?
 - Can we produce a policy?
- MW: Would like to see our biggest offenders and why? Make this competitive between departments or have incentives
- NS: To develop a policy, gather more data and draft a policy
- JD: Needs to be at the department level because some departments may need to keep some papers. Departments would need to develop their own policy
- MW: Purchasing for new printers needs to be justified

Measures



How many reams of paper and how many pages printed?

Waste Minimization Plan

- BD: People need to learn how to recycle better. Recycling is not clean enough
- JG: There is skepticism about City Hall recycling bins on where the waste goes. People are thinking recycling is not going to work
 - City Hall has been trying to do an overhaul of the recycling program
 - o All events and vendors provide ample recycling receptacles in addition to trash
- BD: Part of their goals to change the application process
- It is a goal to get everyone in City Hall a bin and the education
- Ideal to speak/work with custodial/janitorial staff
- We have an opportunity to do an excellent job. We are hopeful that people that work at city hall care more and can learn how to recycle properly
- When something is contaminated, it goes in the trash
- Will not collect single use plastics
 - o Cups, clam containers, single use plastic ware is not recyclable
 - o Why do they have recycling numbers if you can't recycle?
 - Numbers are unregulated
 - It means it has been recycled; it is not recyclable
- JG: Proper labelling for recycling is a big issue
- Water bottles are worth a lot of money in the market
 - The neck is narrower than the base which makes it a very good plastic
- More accountability on Waste Management for sorting and cleaning
- Data collection for the hauler may have already been done
- Benefits: Energy STAR devices
- Some purchases may actually be more expensive for "green" items
- MW: To have an accurate measure, would love to have a solid starting point
 - o Believe the contract is online
- Will schedule a follow up discussion with Beth and Max to target waste minimization project and report back to entire group
 - o BD: New Hailer coming online in October
 - She thinks contract
- MW wants photos of full recycling process because some people deny recycling is occurring
 - Education and outreach on recycling needed internally in the City

Waste Audits at City Facilities

- · Which facilities?
 - Highest waste generation estimated at 100 SW 3rd St; City Hall (100 W Atlantic Blvd); 1300 NE 10th St (Municipal Field); Water distribution plant; Cultural arts building

Sustainable Procurement Policy

- What do we want to include?
- Who would need to approve policy?

Telecommuting

• Policy would be about discretion of supervisor

- Wants high level
- JG: This is a sensitive issue within the City
- Management support needed
- Need a pre-meeting to package information in an attractive way
- Quantity savings and relate to sustainability goals
- Figure out how to pitch it to management effectively

General Discussion

RS&H

- JG: Should have a pre-meeting before that meeting so that data is packaged in a convincing way. Quantifying savings and pitching.
- JD: Flexibility for direct reports
- MW: Target just the people that need to discuss those specific projects for future calls.
 - o One hour is good
- MW: Look at GHG emissions and get a potential number
 - Work up something with existing employee commuting data and relate to climate goals
- The public sector is less receptive to work from home and are losing employees to the private sector because they have more flexibility

CITY OF POMPANO BEACH SUSTAINABILITY PROJECT PORTFOLIO MATERIALS MANAGEMNT AND POLICY & ECONOMICS OUTREACH GROUP MEETING ATTENDEES

Meeting Date: April 11, 2022, 3 – 4PM

Meeting Place: Virtual

NAME ROLE		EMAIL	PHONE
Nathan Stinnette	Sustainability Specialist	Nathan.stinnette@rsandh.com	904-256-2436
Rikki Scantlan	Environmental Specialist	Rikki.scantlan@rsandh.com	210-301-4836
Jean Dolan	Principal Planner	Jean.dolan@copbfl.com	954-786-4045
Jennifer Gomez	Asst Development Services Dir	Jennifer.Gomez@copbfl.com	954-786-4640
Beth Dubow	Recycling Specialist	Beth.Dubow@copbfl.com	954-545-7047
Alex Goldstein	Program Compliance Manager	Alexander.Goldstein@copbfl.com	954-786-4641
Max Wemyss	Sustainability Coordinator	Max.Wemyss@copbfl.com	954-786-4671



City of Pompano Beach Sustainability Project Portfolio – Climate & Resilience and Resource Conservation Group

MEETING AGENDA:

Meeting Date: Tuesday, April 12; 9:30 – 10:30

Meeting Place: Virtual:

https://rsandh.zoom.us/j/99915659355?pwd=UkwxeStrcFNlbjFDYmFWN2dFbWx4U

T09

Participants: John Sfiropoulos, Randy Brown, Michael Taylor, Molly Thistle, Whitney Walsh,

Robert McCaughan, George Buenaventura, Eugene Zamoski, Pete McGinnis, Kim

Spill

Subject: Sustainability Project Portfolio Project ideas

1. Introductions

- 2. Project Overview [OBJECTIVE: Brief participants about the SPP project]
 - 2.1. Baseline
 - 2.2. Benchmarking
 - 2.3. Goals
 - Renewable Energy
 - Climate Action
 - Water Consumption
 - Green Building
 - Electricity Consumption
- **3.** Climate & Resilience and Resource Conservation Sustainability Opportunities [OBJECTIVE: Get the perspective of the working group about sustainable project ideas.]
 - 3.1. Projects
 - City-owned Solar PV Project
 - Community Solar
 - Energy Audits at Selected Facilities
 - Recommission existing facilities
 - Submetering
 - Update Green Building Program
 - Water Audits at Selected City Facilities
- **4.** Action Items / Next Steps [OBJECTIVE: Identify action items / next steps for follow up]
- 5. Adjourn

Compiled By: Nathan Stinnette (904) 256-2436



City of Pompano Beach Sustainability Project Portfolio – Climate & Resilience and Resource Conservation Group

Meeting Minutes

Meeting Date: April 12, 2022, 9:30 – 10:30AM

Meeting Place: Virtual

Participants: Max Wemyss (MW), Gene Zamoski (GZ), George Buenaventura (GB), John

Sfiropoulos (JS), Robert McCaughan (RM), Whitney Walsh (WW), Randolph

Brown (RB)

RS&H: Nathan Stinnette (NS), Rikki Scantlan (RS)

Meeting Minutes:

- Energy Audits at Selected Facilities
- Recommission existing facilities
 - o Which facilities should be included?
 - How often should recommissioning be repeated (have done 5 years in the past)
 - Payback period is on average 1.8 years. The range is 0.5 to 3.5 years (Lawrence Liverpool Laboratory study)
 - It costs \$0.50 per square foot plus capital costs of corrective actions
 - o Funding: How would we fund this project?
 - o Goals: Electricity, water
- Submetering
- Update Green Building Program
- Water Audits at Selected City Facilities

Retrocommissioning

- Cultural Arts Center/Library
 - o Do we pay bills?
 - o It was built 5 years ago
 - LEED building
 - Constantly being used and is very busy on weekends. It is open from 7am to 10pm daily.
 - o Different programs being run out of this facility
 - o GB: Cultural Arts Center/Library is owned by the County. The City pays bills and maintains the building



- Water/chiller/water use (possible chiller efficiency project?)
- City Hall Siemens conversion of AC
 - o Siemens reprogrammed. The system runs from 6am to 6pm
 - o Remodel of 3rd and 4th floor changed everything to LED
 - All bathrooms, faucets, and water closets have sensors for water conservation
 - o There is a chiller in City Hall
- All bathrooms and WCs have sensors for water conservation
- WW: Check timers on irrigation systems, make a little lower.
 - o She can give water use for cultural center, smart metering systems
- Comes on between midnight and 3am. Potential savings here and has smart irrigation meters
 - o There are smart irrigation meters at Kester Park and one at the community park
 - Do not know where the leaks might be
- WW: Drain plug in reservoir of cooling towers in library building was leaking, they caught that with smart meters
 - GB: Civic Centers/older buildings
 - Look into that data
- GB: All 4 properties have public works who runs the grounds and irrigation for the City
- Do you have irrigation audits with the county to do irrigation audits?
 - o Grant funded program where they pay something for it under a contract
 - They have 10 total (only for irrigation, not water use in buildings) 7 irrigation audits per year, select 3 for follow ups
- Facilities are open on weekends and long hours
 - o They have adjusted HVAC units to only run-on specific dates and times
 - o Shuts down around 9-10 at night
 - Water is difficult to know
- Any older buildings?
 - o Civic center buildings GB can provide list
 - o Facilities are open on weekends
 - Need to work on list of facilities to target for retrocommissioning

Submetering

- Are there facilities that you think could benefit from submetering?
 - GB: Not really
- GB: City has 1 meter and the Cultural Arts Center/Library has 1-2 meters
 - o Every building has one or two meters
- Every system is metered with AMI smart meters. Over 19,000 accounts city-wide for City facilities and also community-wide with residences
 - o RB: The City has access to that data. Talk to WW
- Had monthly accounts usage billed
 - Usage was high, notified irrigation technician
- GB: New buildings for City: leakage consumption, leakage consumption system
 - Will stop water consumption if there is a leak



All facilities have had low flow/flush conversions

Updating City Green Building program

- City buildings are required to be LEED Certified
 - When they redid field operations office it was required to be LEED
 - GB: Is there a City policy for LEED? He's not aware of it.
 - MW: Depending on who he's talking to buildings are or are not required to be LEED
 - Definitely strongly encouraged
 - GB Maybe an in-house green building standard or policy is a better way to do it than requiring LEED certifications
 - GB The 4th floor at City Hall: There was provided something very close to a green renovation
 - JS: They go to that level of detail in a design stage by designing mechanical systems
 - Could do a better job on standardizing
 - o MW: Suggested 2 projects:
 - Develop and promote 152 GBP
 - Come up with an internal policy to standardize green building criteria for city buildings
- GB: Has an excel sheet of how many lights they have changed to LED = cost savings of \$80K per year
 - Still doing it in the streets
- If we want to do a whole section Atlantic, or Copal, that could be a project
- MW: Commercial corridors are places to target a streetlight LED conversion
- GB: Each LED streetlight fixture costs about \$800

Takeaways

- Sub-metering is out since they already have smart meters throughout the City
 - Whitney Walsh has the data
 - o They can quickly ID leaks and anomalies
- In need of more sophisticated projects. They have already done the low-hanging fruit
- Maybe a commercial corridor streetlight conversion to LED project. GB has some he wants to do but hasn't had the funding yet
- City Hall and Cultural center are fairly new, big energy users but may not benefit from recommissioning that much
- Look at 2019 energy use for Civic Centers. They may be good targets for recommissioning
- Develop/update GBP for community as one project
- Develop internal Green Building criteria (they are already doing it but allow them to standardize)

CITY OF POMPANO BEACH SUSTAINABILITY PROJECT PORTFOLIO CLIMATE & RESILIENCE AND RESOURCE CONSERVATION GROUP MEETING ATTENDEES

Meeting Date: April 12, 2022, 9:30 – 10:30AM

Meeting Place: Virtual

NAME	ROLE	EMAIL	PHONE
Nathan Stinnette	Sustainability Specialist	Nathan.stinnette@rsandh.com	904-256-2436
Rikki Scantlan	Environmental Specialist	Rikki.scantlan@rsandh.com	210-301-4836
Max Wemyss	Sustainability Coordinator	Max.Wemyss@copbfl.com	954-786-4671
George Buenaventura	Facilities Maint Oper Director	George.Buenaventura@copbfl.com	954-786-4108
John Sfiropoulos	City Engineer	John.sfiropoulos@copbfl.com	954-545-7009
Gene Zamoski	Chief Information Officer		
Randolph Brown	Utilities Director	Randolph.Brown@copbfl.com	954-545-7044
Robert McCaughan	Public Works Director	Robert.McCaughan@copbfl.com	954-786-4097
Whitney Walsh	Utility Billing Manager	Whitney.Walsh@copbfl.com	954-786-4637



City of Pompano Beach Sustainability Project Portfolio – Land Use & Transportation and Equity & Outreach Group

MEETING AGENDA:

Meeting Date: Thursday, April 14; 10AM – 11AM

Meeting Place: Virtual:

https://rsandh.zoom.us/j/93884947478?pwd=aW5vbzRNbkJXbmpYSWE0dmwyZW

ZMUT09

Participants: Horacio Danovich, Tammy Good, Forrest Hall, Kathryn McBryde, Steve Rocco,

Bobby Bush, Michael Rada, Mario Sotolongo, Nguyen Tran, Mark Beaudreau

Subject: Sustainability Project Portfolio Project Ideas

1. Introductions

- **2. Project Overview** [OBJECTIVE: Brief participants about the SPP project]
 - 2.1. Baseline
 - 2.2. Benchmarking
 - 2.3. Goals
 - Fleet
 - Multi-Modal Transportation
 - Climate Action
 - Equity and Outreach
- **3.** Land Use & Transportation and Equity & Outreach Sustainability Opportunities [OBJECTIVE: Get the perspective of the working group about sustainable project ideas.]
 - 3.1. Projects
 - EV / Alt Fueled Fleet Conversion
 - EVSE at City Facilities
 - Fleet Efficiency Upgrades
 - Optimize Fleet
 - Sustainable Streets Master Plan
- **4. Action Items / Next Steps** [OBJECTIVE: Identify action items / next steps for follow up]
- 5. Adjourn

Compiled By: Nathan Stinnette (904) 256-2436



City of Pompano Beach Sustainability Project Portfolio – Land Use & Transportation and Equity & Outreach Group

MEETING MINUTES:

Meeting Date: April 14, 2022

Meeting Place: Virtual

Participants: Michael Rada (MR), Steve Rocco (SR), Mario Sotolongo (MS), Nguyen Tran (NT),

Tammy L. Good (TG), Bobby Bush (BB), Mark Beaudreau (MB), Kaitlyn Kerr (KK),

Forrest Hall (FH) RS&H: Ben Moore (BM)

Subject: Transportation SOP Project ideas

1. Projects

1.1. Fleet Projects:

- MW: Will set up specific meeting between Forrest and his team and RS&H to review the fleet management projects.
- BM: Likely the fleet project will be consolidated into one project.

1.1.1. EV / Alt Fueled Fleet Conversion

- BB: Supports the idea, as does the rest of the group. However, RS&H and MW need to talk to Forrest Hall / Fleet Management about this
 - SR: Forrest Hall is away on a trip to procure new vehicles (E.g., fire and rescue vehicles).

1.1.2. Fleet Efficiency Upgrades

The group had no objection to this project subject to Fleet Management review.

1.1.3. Optimize Fleet

MW: Already use shared vehicles at City Hall. No objection to expansion of this practice, subject to Fleet Management review

1.2. Electric Vehicle Support Infrastructure (EVSE) at City Facilities

- MW: There are some EV charging stations / EVSE already installed, but should be expanded
 - BB: How would EVSE affect employee commuting?
 - MW: EVSE would generally support use of EVs. There are no specific incentives for EVs for City employees contemplated for the project portfolio.
- KK: Bury center (@ Copans & Federal) has EVSE. It is used all the time, likely by a resident.
 - TG: To use the station a code must be obtained by entering the facility to request it. This reduces irresponsible use of the EVSE.
- TG: EVSE at the Beach and Harbor Village now charge for use. Used to be free but added fees in response to complaints to abuse of EVSE.
- Where should stations be located?



- BB: Suggest EVSE at City Hall
- MW: Suggest EVSE at library, parks, and any other public lot
- TG: EVSE must be monitored and managed, which is a cost to the City. Need a master plan for how to manage the EVSE network, collect revenue, etc. Check w/ Rob (Public Works) regarding openness to more stations.

1.1. Sustainable Streets Master Plan

- MW: Has developed a pamphlet for complete streets. This project would expand on its contents by establishing a minimum standard for all street development throughout the City. Some features to include:
 - o More bike lanes in the City. Streets are often resurfaced in the same condition.
 - o Efficient, low-light pollution, safe lighting
 - Stormwater Management
 - TG: Aggressive program in place already to manage stormwater, via swales, rain gardens, etc. This is mandated by code and enforced by AHJs.
 - TG: Could provide assumptions to support cost savings from LID / green infrastructure stormwater management vs. traditional practice.
 - MW: Landscaping requirements are currently in place, requiring 1 street tree per 30 feet and initial irrigation. Preference for native plants and requirement for no longterm irrigation.

1.2. Green Building Program

- MW: City projects are expected to participate in a program like LEED, unless burdensome.
 Comp Plan Recreation and Open Space element requires all new buildings to meet LEED silver, as well as a level of freeboard above flood elevations. But there is No clear policy directing green building for City buildings
 - TG: CIP is focused on applying LEED where it is most beneficial, e.g., reducing operating costs and maintenance. Has developed BMPs for LEED / Green building, which she can share for expansion into a standardized approach that could apply City-wide.

1.3. Sustainable Development Standards

MW: A voluntary incentive program is in place that isn't utilized as expected. It could be
developed further to encourage participation. There are also development guidelines in the
zoning code that provide "points" and development bonuses for certain features. The
Planning Department has worked on revising these standards, so it makes sense to
incorporate this work into our project portfolio. Max will send this information.

1.4. Employee Sustainability Training

- MW: All employees should be required to partake in a baseline level of sustainability training to support behavioral programs, e.g., waste minimization, etc.
- TG: Education required for facilities maintenance personnel so that they understand the benefit of LEED in terms of life cycle operational savings, etc.

1.5. Address Food Deserts

- MW: North Miami has a strong model, providing a periodic food pantry to residents.
- MW: There is a community garden where produce is grown. It is operated by a third-party contractor via CRA project. Produce is either sold on site or sold at a farmers market.



1.6. Additional Ideas:

1.2.1. KK: Develop a telecommute policy.

1.2.2. <u>Maximize / Minimize Use of Recreational facilities</u>

• KK: Facilities are often operated from 8 – 8 and are underutilized. Adjust hours more optimally (e.g., reducing hours) could save energy and staffing expenditures. Can provide assumptions for developing this concept further.

2. Action Items / Next Steps

- 2.1. Bold items are those suitable for further cost benefit analysis. Unbolded items are suitable for further qualitative development, e.g., as policy-oriented initiatives.
- 2.2. MW: Set up meeting between RS&H and Forrest Hall / Fleet Management
- 2.3. MW: Set up a meeting between RS&H and Rob McCaughan regarding EVSE
- 2.4. TG: Provide assumptions to support cost savings from LID / green infrastructure stormwater management vs. traditional practice.
- 2.5. TG: Provide BMPs that CIP Department has developed for LEED / Green building, which could be expanded into a standardized approach that could apply City-wide.
- 2.6. MW: Provide the Planning Department's proposed revision to Commercial-sector green building requirements.
- 2.7. KK: Provide assumptions for reducing operating hours of Parks and Recreation facilities, including identification of facilities, current operating hours and proposed operating hours.

Compiled By: Ben Moore, 954-236-7379



City of Pompano Beach Sustainability Project Portfolio – Land Use & Transportation and Equity & Outreach Group

MEETING MINUTES:

Meeting Date: May 14, 2022May 26, 2022

Meeting Place: Virtual

Participants: Michael Rada (MR), Steve Rocco (SR), Mario Sotolongo (MS), Nguyen Tran (NT),

Tammy L. Good (TG), Bobby Bush (BB), Mark Beaudreau (MB), Kaitlyn Kerr (KK),

Forrest Hall (FH) RS&H: Ben Moore (BM)

Subject: Transportation SOP Project ideas

1. Projects

1.1. Fleet Projects:

- MW: Will set up specific meeting between Forrest and his team and RS&H to review the fleet management projects.
- BM: Likely the fleet project will be consolidated into one project.

1.1.1. EV / Alt Fueled Fleet Conversion

- BB: Supports the idea, as does the rest of the group. However, RS&H and MW need to talk to Forrest Hall / Fleet Management about this
 - SR: Forrest Hall is away on a trip to procure new vehicles (E.g., fire and rescue vehicles).

1.1.2. Fleet Efficiency Upgrades

The group had no objection to this project subject to Fleet Management review.

1.1.3. Optimize Fleet

 MW: Already use shared vehicles at City Hall. No objection to expansion of this practice, subject to Fleet Management review

1.2. Electric Vehicle Support Infrastructure (EVSE) at City Facilities

- MW: There are some EV charging stations / EVSE already installed, but should be expanded
 - BB: How would EVSE affect employee commuting?
 - MW: EVSE would generally support use of EVs. There are no specific incentives for EVs for City employees contemplated for the project portfolio.
- KK: Bury center (@ Copans & Federal) has EVSE. It is used all the time, likely by a resident.
 - TG: To use the station a code must be obtained by entering the facility to request it. This reduces irresponsible use of the EVSE.
- TG: EVSE at the Beach and Harbor Village now charge for use. Used to be free but added fees in response to complaints to abuse of EVSE.
- Where should stations be located?



- BB: Suggest EVSE at City Hall
- MW: Suggest EVSE at library, parks, and any other public lot
- TG: EVSE must be monitored and managed, which is a cost to the City. Need a master plan for how to manage the EVSE network, collect revenue, etc. Check w/ Rob (Public Works) regarding openness to more stations.

1.1. Sustainable Streets Master Plan

- MW: Has developed a pamphlet for complete streets. This project would expand on its contents by establishing a minimum standard for all street development throughout the City. Some features to include:
 - o More bike lanes in the City. Streets are often resurfaced in the same condition.
 - o Efficient, low-light pollution, safe lighting
 - Stormwater Management
 - TG: Aggressive program in place already to manage stormwater, via swales, rain gardens, etc. This is mandated by code and enforced by AHJs.
 - TG: Could provide assumptions to support cost savings from LID / green infrastructure stormwater management vs. traditional practice.
 - MW: Landscaping requirements are currently in place, requiring 1 street tree per 30 feet and initial irrigation. Preference for native plants and requirement for no longterm irrigation.

1.2. Green Building Program

- MW: City projects are expected to participate in a program like LEED, unless burdensome.
 Comp Plan Recreation and Open Space element requires all new buildings to meet LEED silver, as well as a level of freeboard above flood elevations. But there is No clear policy directing green building for City buildings
 - TG: CIP is focused on applying LEED where it is most beneficial, e.g., reducing operating costs and maintenance. Has developed BMPs for LEED / Green building, which she can share for expansion into a standardized approach that could apply City-wide.

1.3. Sustainable Development Standards

MW: A voluntary incentive program is in place that isn't utilized as expected. It could be
developed further to encourage participation. There are also development guidelines in the
zoning code that provide "points" and development bonuses for certain features. The
Planning Department has worked on revising these standards, so it makes sense to
incorporate this work into our project portfolio. Max will send this information.

1.4. Employee Sustainability Training

- MW: All employees should be required to partake in a baseline level of sustainability training to support behavioral programs, e.g., waste minimization, etc.
- TG: Education required for facilities maintenance personnel so that they understand the benefit of LEED in terms of life cycle operational savings, etc.

1.5. Address Food Deserts

- MW: North Miami has a strong model, providing a periodic food pantry to residents.
- MW: There is a community garden where produce is grown. It is operated by a third-party contractor via CRA project. Produce is either sold on site or sold at a farmers market.



1.6. Additional Ideas:

1.2.1. KK: Develop a telecommute policy.

1.2.2. <u>Maximize / Minimize Use of Recreational facilities</u>

• KK: Facilities are often operated from 8 – 8 and are underutilized. Adjust hours more optimally (e.g., reducing hours) could save energy and staffing expenditures. Can provide assumptions for developing this concept further.

2. Action Items / Next Steps

- 2.1. Bold items are those suitable for further cost benefit analysis. Unbolded items are suitable for further qualitative development, e.g., as policy-oriented initiatives.
- 2.2. MW: Set up meeting between RS&H and Forrest Hall / Fleet Management
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- 2.6. MW: Provide the Planning Department's proposed revision to Commercial-sector green building requirements.
- 2.7. KK: Provide assumptions for reducing operating hours of Parks and Recreation facilities, including identification of facilities, current operating hours and proposed operating hours.

Compiled By: Ben Moore, 954-236-7379



City of Pompano Beach Sustainability Project Portfolio Meeting with Max Wemyss, Sustainability Coorinator

MEETING MINUTES:

Meeting Date: May 18, 2022, 9:00 AM

Meeting Place: Virtual

Participants: City of Pompano Beach: Max Wemyss (MW)

RS&H: Nathan Stinnette (NS)

Subject: Pompano Beach Sustainability Project Portfolio Updates

1. Project Portfolio

- Priorities
 - Sustainable purchasing, telecommuting, Green Building Program, Paper Reduction
 - Fleet policy: need to require justification if the vehicle is not an EV
 - Waste Minimization: tied to existing contracts and when they come up for renewal
- Secondary Items
 - Resource Conservation
 - MW: Do not say everything will pay for itself, does not seem realistic
 - MW: Does not want to wait based off expense
 - Limited by contracts (waste, fleet)

2. Alignment with other City Programs

- The Comp plan includes 8 phases of sustainability strategy
- Strategic plan initiative for resource conservation needs to be bundled and included by reference
 - Not overly specific
 - Needs to be updated in 5 years for more policies
 - Max will look at the 5-year timeline

Capital Improvements Program

- Solar and building retrofits fall within the program as well as new structures
- New building code program
- o Future city projects would reference green building code

3. Need to Schedule a commission meeting

- We will develop the meeting materials and tell DEO that it is scheduled but that we were not able to complete by the D2 deadline
- Find out if the meeting has to happen before the June 30th stop work date?



4. RC1

- City does not own airpark buildings. FBO's at airpark lease the land and own their buildings, but they have good relationships with FBO's
- Might be better to locate solar array on the ground
 - Is there a way to estimate with a ground unit?
- MW: Leave it to industry professionals
 - o Get diverse proposals, evaluate what has the biggest impact

5. CR2

- City just revised fee schedule
 - Reduced fee for solar arrays
- Review of projects is quite simple
 - Fee now tied to kWh produced
 - Under a certain size is a set fee
 - Reduce barriers to solar

6. RC2 Green Building Program

- MW: Would like to see on projects of a certain size (possibly required)
 - Solar and EV ready (over 50 parking spaces)
 - Model legislation from other municipals
- They require all development over a certain size to get a certain number of points in development standards
 - Those points are very easy to obtain. For example, hurricane resistant (already required by FL building code), or infill (everything in CoPB is infill)
 - Need to revamp development standards to make sustainability stuff more meaningful
- Miami-Dade county has an EV ordinance, best one is Boca Raton, some require all developments to be EV ready (such as Orlando)
- A couple of years ago, CoPB had an employee attempt to revise community green building standards
 - It was not a commissioned study
 - Development community felt they did not have enough input and wanted a third party to vet the proposal
 - Include City managers, development services and Max, public works
 - George B. and Tammy Good. Max will check on square footages
 - NS: Find Hallandale building code
- MW: Wants a 2-pronged initiative
 - Community development standards in zoning code
 - LEED certifications in building code (incentive should be in the form of a rebate in building permit fees or reduction – to incentivize program and savings)
 - All buildings should be required to follow the model and Community buildings should choose from a menu of sustainability points
- CoPB zoning code
 - Strange development standards
 - Multifamily unit must receive 10 points (Table 155.55802 sustainable development options and points - also includes participants)
 - o To effectively revise it, they need a study with education and outreach to development community, 3rd party vetted
 - Includes city management office who needs an analysis of whether it would kill projects



- Existing green building program
 - For non-city projects it is voluntary

7. 156.66 Standards

- Incentives
 - Reduced permitting and reimbursement
 - Project awards
 - Reward has never been provided
- There is supposed to be a manual, but it was never created
- Some city departments think they must do it, others ignore it
 - LEED recertification burden is placed on building maintenance
- MW: Public facing projects should be LEED certified, less public facing buildings need to follow sustainability criteria
 - MW: They should elect to do LEED, on the other side would like to have a manual of expectations, similar to LEED but tailored for the City
- MW: Would like to take it through their economic development council to have them endorse it

8. RC1

- Given what George provided about the other facilities more could be done
 - Could base on Emma Lou and Skolnick Centers
 - Could include additional facilities at a lower rate of return

9. RC3

- Need data on costs of water irrigation audits and rebate amounts
 - Rebates limited to a certain number per year
 - Rebate amount is 100%

10. RC6

- Just did a new geobond
 - All lighting is daylighting with LED, done since 2019
- MW: Wondered if there is a log of paper use and types
- NS drop this project

11. MM3

- Find waste contract
- NS I should have it from Baseline project

12. PE3 Telecommuting

- MW: Likes 50% reduction for all FTEs
- Engineering Visits
 - Inspectors at City Hall
 - Could be virtual visits
 - Gainesville does inspections over Zoom for some easy permits for minor jobs done with contractor
- MW: 50% of all employees would be ok for modeling employees
 - Would be good to have fire, emergency management number sto exclude essential workers
 - This is essential and non-eligible for telecommuting (Max will try to get data)
 - 50% excluding fire and emergency management
- Number of essential employees not eligible for telecommuting



13. PE4

- Likes including communications
- It is tied to savings
- The Policy is created from reliable data
 - If we are reporting on a regular basis, there should be a summary of progress towards goals
 - 0.1% is probably low
 - NS will revise to 0.2%

14. Fleet Projects

- MW: Worried that if we set up based on 2019 with old vehicles, and now have the Enterprise contract with leased vehicles, it might not be a good model for fleet initiatives
 - Wants the initiatives to reflect current reality in the city with the Enterprise contract
- Now the City must wait through the lease period to change the vehicles, cannot recover any resale value
 - The City still purchases fuels so they can get fuel savings
 - There may be limits on what vehicles are available under the lease arrangement

15. EO2

- MW: Likes the Hallandale model
 - Increasing employee awareness
 - Make them aware of the utility initiatives and new City projects
- Could introduce employees to City policies
 - Such as the green building program, Sustainable purchasing program
 - MW: Agrees that this makes sense, to develop trainings in house
 - Could reach out to Hallandale and ask for their material

16. Address Food Deserts

- Should not be focused on a return
 - Write up as a BMP
- Idea 1 Open a food bank in City facility
 - First ID communities with the most need
 - o What space is available for what kind of service?
 - Should be public sponsored, farmers market approach
 - Churches have a lot of undeveloped land
 - Expand community garden project?
 - Community benefit
 - Supplement food banks
 - Bus Stop farmerks market idea
 - Transfer station in CoPB already across from a supermarket
- Idea 2 Feeding South FL
 - The largest non-profit
 - They provided free food during COVID
 - Maybe an evolution of that project?
 - MW: Did not like that it was one centrally located feeding
- City of North Miami operates a food bank in space owned by community redevelopment agency
 - They use church properties
 - CPB would need to get churches who are willing to partner with the City
 - City would have to sponsor a manager for the program
 - Could they be grant funded?
 - Max has a software that gives grants based off of key words



- Idea 3 City project to provide a space to attract a legitimate grocery store
 - Needs a facility that incorporates a retail area and leases at a low rate
 - Maybe the City needs an office
 - Could build a building larger than they need with leasable area

17. Action Items / Next Steps

- Need meeting with Beth Dubow on Waste Minimization project as soon as possible
- Alignment with other City plans and programs
 - Including but not limited to the Strategic Plan, Comprehensive Plan and GO Pompano Project Program
- Getting projects in capital plans
 - o NS: Any special date/ milestones to be aware of?
- MW: Will talk to Molly and John S.
- Try and get a meeting with Beth and Forrest
 - Loop Ben in on meeting with Forrest
- NS: Need Enterprise contract, waste management contract, solar references, paper and printer inventory
- MW: At some point should have a survey about general sustainability preferences
 - Commuting surveys
 - Include under data management add survey
- MW: liked the payout from Appendix to prior deliverable project list
- NLS: Send Max an invite for Thursday end of the day
- Timing for Deliverable
 - State wants it by Sunday, May 29th
- By June 30th:
 - o Commission 1st and 2nd Tuesday of every month
 - o Max will get a package on agenda by the 27th
 - Could get a meeting in June
 - Max will get the earliest agenda
- Possible available times: Tuesday June 14th at 1 PM or Tuesday June 28th at 6 PM



City of Pompano Beach Sustainability Project Portfolio – Fleet Updates and Discussion

MEETING MINUTES:

Meeting Date: May 23, 2022, 8:00 AM

Meeting Place: Virtual

Participants: City of Pompano Beach: Max Wemyss (MW), Forrest Hall (FH)

RS&H: Nathan Stinnette (NS); Ben Moore (BJM)

Subject: Fleet Meeting

1. Updates/ Unanswered Questions

- FH: Main concern is not to get ahead of ourselves
 - Need charging infrastructure to change as well as training
 - Need to include training cost in model
 - Fire Department has concerns
 - Need training to keep people safe
- EV Charging Fleet locations
 - There are some on the beach (beach parking is public)
 - Do not have any at City hall
 - One at the water plant
 - Charlottebury
- Charging stations needed for fleet
 - Should not be shared with the public
 - Would have to figure out what departments to start with
 - Need one at City Hall
 - BJM: consider L2 charging stations that can charge 2 vehicles at a time. Simple, inexpensive models with no controls.
 - FH: Slow charge to give the best and fastest charge
 - Most vehicles are not traveling long distances (20 square mile city)
 - City employees need to be aware that they need to plug in the vehicle
 - May need training for people that need to use vehicles
 - MW: Maybe start with a survey of who would want to use the EVs
 - FH: Get with Bryan and figure out where we want to start
 - Not sure which departments would be best to start with
- EV Pilot Project
 - o Mail lady drives around all day FH thinks her vehicle would be a good EV candidate
 - Pushback expected from supervisors and managers because they think bigger is better
 - They need management to push it so they don't have a choice

2. Parks and Recreation, Building Department, and Pool Cars

BJM: Cars over 12 years old and have 40K miles, many significantly underutilized



- FH: Tried to pull vehicles and get them to share, but people push back
- Some vehicles at City hall hardly get used
 - Zoning car only has 450 miles on it

3. Enterprise contract

- FH: Time frame is longer, takes longer than purchasing through sheriff's contract or Sourcewell contract
 - Takes more than a year to get the vehicles in
- Once you have paid the 5-year lease it feels like you pay more overall
- Maintenance costs go up after year 8
 - o If the cars are low mileage, you can go 10 years
- They maintain leased vehicles
 - They only keep the cars for 5 years then they get new vehicles
 - When they hand them back, there can be chargebacks on the vehicles
 - Could be charges for damage
- FH: Thinks they can get the EVs through Enterprise
 - The biggest they go is Chevy 4500 vehicles
 - Takes a long time to get trucks
 - Utilities dept they get money from water bills, have their own budget
 - Money comes from a different source they are self-purchasing
- Enterprise is for leased pickups, cars, and Escapes
- City funds still purchase bigger trucks

4. Training

- BJM: There are 28 vehicles over six years in the model proposal
 - FH: Need to add training
 - FH: Will have to look into who offers what training
 - Would have at least 7 techs plus shop foreman and Forrest
 - Forrest will only be at the City for another 2 years
 - FH can contact people at Ford and Chevy RE training for EVs
 - Probably a one-time training
 - How many days?
 - New techs would also need training

5. Purchasing and Leasing

- FH: 4th floor dictates whether vehicles are purchased or leased
 - 5 years ago, \$1.5 million was borrowed from a bank to buy a fire engine and support squad vehicle
 - Needed to keep it 5 years until the loan payment is paid back
- Propane vehicles
 - BJM: Fueling infrastructure is relatively cheap, fuel cost is lower, and has environmental benefits
 - o For Ford 250, 350, 450 trucks
 - 25 vehicles over 5 years
 - o Similar ROI to electric
- FH: Investigated propane 5 years ago
 - Shop would have to be outfitted with ventilation system



- Can't bring vehicles into the shop unless you have a vent system to pull propane or NG out of the air
- BJM: code does not require for propane
- FH: does not feel comfortable without ventilation system
- BM Knows Broward county fleet guy (Paul), could put Forrest in touch with him
 - Paratransit fleet operator at Broward County, does not have ventilation in his shop
 - o Broward short buses are all propane, similar chassis to F450
- CoPB shuttle
 - Run and maintained through private company
 - Funded by Broward grants
 - Their buses are probably only a year old
 - City does not purchase or maintain them

6. Fleet efficiency upgrades

- BJM: At replacement, specify a much more efficient vehicle
- Replace Ford Ranger with Maverick, other vehicles with hybrids
- o If vehicles are 8 years old or more, replace with fuel efficient version
 - About 40 vehicles over next 6 years
- Most Ford Rangers are used by Parks and Recreation
 - Most 2011's will be gone this year
- GMC Canyons were pool vehicles
 - Going to auction right now
- Nissan Frontiers
 - List from 2019, a lot of vehicles have been replaced or redistributed
 - New Nissan Frontiers from Enterprise
- FH: City working on budget and should be seeing it shortly
 - He will have a better idea which vehicles they will allow them to replace
 - Once he gets that we could talk again and get an idea what they are looking to replace next year
 - Had meeting with City manager last week
 - o FH could get with us once they know what they can replace
 - Could make ~7 of 15 EVs
 - Order them in October- could be through Enterprise or purchased directly
 - Then would know how many EVSE to get
- MW: Will work out with George at building facilities and Mike in building department
- FH: EVSE could go in spots formerly reserved for commissioners near AC units

7. Optimize fleet

- A lot of vehicles with <2,500 miles per year, or very low gasoline consumption
- Excluding heavy-duty vehicles
 - o Are these vehicles underutilized?
 - o Could they be consolidated?
- The idea is to surplus the vehicles and have a limited amount of pool vehicles replacing 25 vehicles with low usage, replace with 14 more efficient counterparts
 - o Fire operation ones would not be able to get away with
 - Planning and zoning fair game
 - Could consolidate to 1 or 2 instead of 5
 - Forrest has been trying to do it for years



- MW: Trying to package data in a way they can show to department heads
 - At the end of the day it is their budget/decision
- Ocean rescue
 - Just goes up and down the beach
 - Low mileage but they rust out
- 27 out of that list could be divested
 - o 14 new vehicles
 - o Fuel efficient hybrids could be pool vehicle for a group
 - Not a huge payback
- FH: If they have underutilized vehicles, they could move them to another department to replace something that is due for replacement

8. Action Items/ Final Thoughts

- Purchasing EVSE for the public
 - Would be a net cost for the public
- MW: Maybe that would go under building maintenance
- Can still talk about it
 - But no model
 - MW agrees
- BJM is for EVSE for fleet
 - Does not have flashy communications, just simple L2 chargers
- Fleet yard at City hall
 - o No differentiation between staff and public lot
- MW: Use utilitarian chargers for City Hall, ok for analysis
- FH: need charging stations at fleet
 - Maybe just 1 dual at garage so they can charge around maintenance need one at first to go around
- BJM will add training cost to both alterative fuel and propane
- Introduce FH to Paul Strobas at Broward County



City of Pompano Beach Sustainability Project Portfolio – Green **Building Program**

MEETING MINUTES:

Meeting Date: May 26, 2022, 4:00 PM

Meeting Place: Virtual

Participants: City of Pompano Beach: Max Wemyss (MW)

RS&H: Nathan Stinnette (NS)

Subject: Green Building Program

1. Building Code

- **Zoning Code HA**
 - RC2
 - A couple of years ago, CoPB had employee attempt to revise community green building standards
 - It was not a commissioned study
 - Development community felt they did not have enough input and wanted a third party to vet the proposal
 - Include City managers, development services and Max, public works
 - George B. and Tammy Good. Max will check on square footages.
 - NS: Find Hallandale building code
- MW: Wants a 2-pronged initiative
 - Community development standards in zoning code
 - LEED certifications in building code (incentive should be in the form of a rebate in building 0 permit fees or reduction – to incentivize program and savings)
 - All buildings should be required to follow the model and Community buildings should choose from a menu of sustainability points
- CoPB zoning code
 - Strange development standards
 - Multifam unit must receive 10 points (Table 155.55802 sustainable development options and points - also includes participants)
 - To effectively revise it, they need a study with education and outreach to development community, 3rd party vetted
 - Includes city management office who needs an analysis of whether it would kill projects
- Existing green building program
 - It is for non-city projects

2. 156.66 Standards

- Incentives
 - Reduced permitting and reimbursement

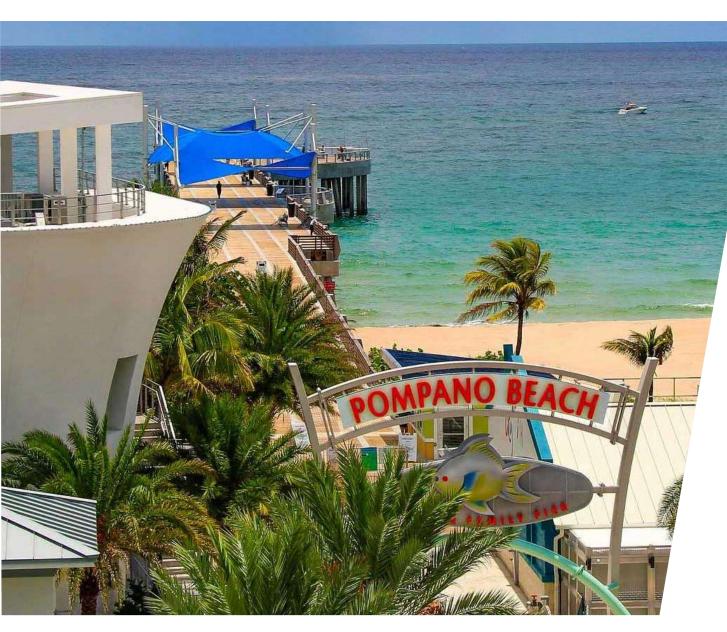


o 954-474-3005 **F** 954-474-3006 rsandh.com



- **Project awards**
- Reward has never been provided
- There is supposed to be a manual, but it was never created 0
- Some city departments think they must do it 0
 - Recertification burden is placed on building maintenance
- MW: Public facing projects should be LEED certified, less public facing buildings need to 0 follow sustainability criteria
- MW: They should elect to do LEED, on the other side 0
 - Manual of expectations, similar to LEED but tailored for the City
- MW: Would like to take it through their economic development council to have them 0 endorse it
- There previously was someone redoing the sustainable development standards but there 0 was significant pushback from the development community

APPENDIX D: COMMISSION MEETING



Pompano Beach Sustainability Project Portfolio

City Commission Meeting
June 14th 1:00 pm

Agenda

- 1. Project Context
- 2. Overview
- 3. Project Portfolio
- 4. Implementation Plan
- 5. Next Steps



Sustainability Work Plan



Project Overview





Project Portfolio

- » Contains a set of 17 initiatives that will generate a net return of more than \$3.2 million
- » Expands public services and enhances environmental stewardship
- » Returns will come from reducing energy, water, and fuel use, embracing renewable energy, increasing efficiency and improving materials management through source reduction and recycling
- » Some projects do not have economic benefits, but address important social and environmental challenges in the community, such as food deserts and green buildings





Project Portfolio

Project	Net Benefit	Investment
CR1. City-owned Solar PV	\$1,240,000	\$1,015,000
CR2. Streamline Community Solar Permitting*	\$1,628,000	\$1,410,000
RC1. Energy Audits	\$5,000	\$5,000
RC2. Update Green Building / Sustainable Development Standards	-\$156,000	\$170,000
RC3. Water Audits at Selected City Facilities	\$120,000	\$25,000
RC4. Optimize Use of Recreational Facilities	\$1,220,000	\$0
MM1. Print and Paper Use Reduction	\$115,000	\$0
MM2. Sustainable Procurement Policy	\$27,000	\$0
MM3. Waste Audits at City Facilities	\$10,000	\$10,000
PE1. Hybrid Work Policy	\$148,000	\$0
PE2. Sustainability Data Management and Reporting	\$0	\$65,000
LT1. EV Fleet Transition	\$214,000	\$231,937
LT2. Propane Fleet Transition	\$154,000	\$196,000
LT3. Fleet Efficiency Upgrades	\$164,000	\$62,277
LT4. Optimize Fleet	\$50,000	\$54,578
EO1. Address Food Deserts	-\$82,000	\$85,000
EO2. Employee Sustainability Training	\$3,000	\$31,500
Total to City and Community (10-year NPV at 4.5% discount rate)	\$4,860,000	\$3,360,000
Total to City (10-year NPV at 4.5% discount rate)	\$3,232,000	\$1,950,000

Portfolio Benefits - GHG Reduction

Avoided GHG Emissions

- Total Local Government Avoided GHG Emissions:
 - 1-year savings: 2,040 MTCO2e
- GHG reduction benefits of 2,040 metric tons of CO2 equivalents are equal to:
 - Taking 474 cars off the road
 - Or, protecting 2,600 acres of forest for a year
 - And amount to 71% of the City's 2030 LGO GHG emissions reduction goal



Portfolio Benefits – Resource Conservation

• Total Fuel Savings (kWh):
• 10-year: 15,387,848

• Total Fuel Savings (GGE):
• 10-year: 289,067

• Waste to Landfill Avoided or Recycled (Tons):
• 10-year: 2,491



Implementation Plan

- » Includes recommendations for:
 - Management strategies
 - Budget
 - Schedule
 - Metrics and reporting
 - Overcoming barriers
 - Funding recommendations
 - Alignment with other City plans, programs and policies





Implementation Plan

SPP Investment Schedule

ID	Project	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
CR1	City-owned Solar PV	\$15,000	\$1,000,000								
CR2	Streamline Community Solar Permitting**										
RC1	Energy Audits and Retro-commissioning	\$3,000	\$2,000								
RC2	Update Sustainable Development Standards	\$125,000		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
RC3	Water Audits at Selected City Facilities	\$25,000									
RC4	Optimize Use of Recreational Facilities										
MM1	Print and Paper Use Reduction										
MM2	Sustainable Procurement Policy										
MM3	Waste Audits at City Facilities	\$10,000									
PE1	Hybrid Work Policy										
	Sustainability Data Management and										
PE2	Reporting	\$65,000									
LT1	EV Fleet Transition	\$51,518	\$36,463	\$43,285	\$47,620	\$36,533	\$16,517				
LT2	Propane Fleet Transition	\$49,400	\$35,226	\$36,071	\$36,937	\$37,823					
LT3	Fleet Efficiency Upgrades	\$16,860		\$12,604		\$29,736					
LT4	Optimize Fleet	\$25,580	\$16,394	\$12,604							
EO1	Address Food Deserts	\$35,000	\$50,000								
EO2	Employee Sustainability Training		\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500
	Total Estimated Annual Investment	<i>\$421,358</i>	\$1,146,660	\$113,064	<i>\$93,057</i>	<i>\$112,593</i>	\$25,017	\$8,500	\$8,500	\$8,500	\$8,500

Next Steps



Thank you!

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