



Action

FUNDING & EVALUATION

Sustainability requires investment. By focusing on quick wins with big returns, the City can leverage its success and prove that low-impact, efficient and responsive government makes financial sense. These successes can help pave the way for other, lower ROI projects, which are no less important for community members and the environment.

The City has already begun investing in cost-effective solutions that will reap long term economic, social and environmental rewards. However, more direct investment is required. The City will also focus on attracting external resources, such as low-interest loans, grants and incentives from federal, state, local and private sources. Many of this SAP's projects are eligible for such support. With the newly established grants development office this focus is now possible.

Sustainability requires evaluation and as projects are implemented, progress must be measured at regular intervals to ensure that the projects are performing as planned. In some cases, the City may make adjustments or course corrections to ensure desired results are obtained. It is necessary to measure the success of a sustainability program in order to manage it effectively. It has been said that, "you are what you measure".

The STAR Community Rating System (STAR) is the nation's first voluntary, self-reporting framework for evaluating, quantifying, and improving the livability and sustainability of U.S. communities. Used as an evaluation tool, STAR facilitates meaningful comparisons of cities' sustainability performance, addressing social, economic and environmental aspects of the community.

As a first step towards certification, the SAP Project Management Team used STAR to benchmark, Hallandale Beach's sustainability progress to three similar communities (Pinecrest, FL, Park Forest, Illinois and Broward County, Florida). The team also performed a feasibility assessment to determine if the City is ready to pursue STAR certification. The results show that Hallandale Beach is comparable to its regional peers, with the potential to earn a 3-STAR rating. City Commission acceptance of this SAP will authorize the path to STAR certification for the City to begin.

See the Appendix for the results of benchmarking and the Star Communities Certification project in this section for the City's next steps towards STAR certification.



UTILITY MANAGEMENT SYSTEM

- NPV: \$19,000
- ROI: 36%
- Contribution to Goal: 90%
- Lead Department / Division: Innovation Technology
- Responsibility: IT Director

REVOLVING FUND

- NPV: 0%
- ROI: ∞^*
- Contribution to Goal: **
- Lead Department / Division: Finance
- Responsibility: Finance Director

COMPLETE A GREENHOUSE GAS INVENTORY

- NPV: -24,000
- ROI: -100%
- Contribution to Goal: *
- Lead Department/Division: Public Works
- Responsibility: Green Initiative Coordinator

STAR COMMUNITIES CERTIFICATION

- NPV: -\$13,000
- ROI: -100%
- Contribution to Goal: 0%
- Lead Department/Division: Public Works
- Responsibility: Green Initiatives Coordinator

*For projects with low or no cost, the return on investment is mathematically infinite, denoted by the symbol: ∞
**The contribution of this projects to goal cannot be calculated at present but will be calculated as projects and project ideas are further developed.

PROJECTS

The City will strive to achieve the financial performance projected for the portfolio of projects included in this plan. It will also plan to establish new internal mechanisms for ensuring that these projects have the required resources to move forward. Sustainability and resiliency must become embedded in the annual budget development process. The revolving fund project will help make this happen.

A well-designed evaluation process will make the entire sustainability program more effective, and will also allow the City to communicate its progress to a wide variety of stakeholders. Evaluation requires a comprehensive but focused system for collecting, managing and analyzing data, a schedule, means of obtaining feedback from stakeholders and a provision for continual improvement. Three projects will help advance these concepts, including Utility Management System, complete a Greenhouse Gas Inventory and STAR Communities Certification.

UTILITY MANAGEMENT SYSTEM

Integrating utilities (electric, water and other commodity billings) into a software solution or database can track, trend and report on utility use and help verify results from energy efficiency investments. Typically, this can result in energy savings ranging from 1-10% from prioritizing investments, identifying erroneous billings and learning of anomalies before they become costly.

For this project, the City will utilize software tools to manage the City's FPL energy utility bills on a monthly basis. The effort will include auditing bills, tracking usage and costs, benchmarking facility performance, tracking the results of energy savings projects, analyzing trends and reporting on performance. Over time, the City will expand the tool to include other facilities-based utilities and services, including water and waste.

Such a system enables much more creative control of the City's resource use. For example, it would enable departments to be assigned a "budget" for resource use and to be "charged" for utilities. It also supports the accounting systems required to implement a revolving fund that will support long-term investment in sustainability projects at the department level.

Direct economic benefits of this project are conservatively estimated at one percent of electricity expenditures, with a net present value of \$19,000 over the 10 year project life. Other benefits include facilitating sustainability reporting and program management, and the potential to identify additional

cost savings through use of the tool. Implementing the project will require selecting and procuring a utility management solution. The City will also populate the free, online ENERGY STAR Portfolio Manager with facility utility data. Costs are estimated at \$50,000 for an off-the-shelf Utility Management Solution, including implementation, configuration, customization, interfaces and training, with an additional annual software licensing fee of \$2,500 per year.

REVOLVING FUND

Measures designed to save resources can be highly cost effective. However, these measures require sustained investment to fully realize benefits. A revolving fund is a method of providing on-going access to capital for "green" projects. Initially, the revolving fund is "seeded" with capital. Sources include appropriations, grants, rebates and savings from existing projects. The fund invests in resource conservation projects with repayments from savings going back into the fund and thus helping to finance new projects. Cost savings realized from high ROI projects are leveraged to help fund low ROI, but environmentally or socially impactful projects. This approach reduces the amount of funding needed from the City's General and Enterprise Funds.

The projects included in this SAP will return over \$8 million in revenue and avoided costs over 10 years. The revolving fund will allow these returns to be reinvested in other green initiatives as time goes on, allowing continual improvement and expansion of the sustainability program.



Action





Accelerate < Progress



Action

The City should establish a revolving fund for the recommendations included in this plan. A Revolving Fund Management Committee will develop and administer policies, approved by the City Commission, for fund management, including criteria for eligible energy and water efficiency projects and financial performance. Project performance will be monitored and verified. **The following steps will be needed:**

- Establish a Revolving Fund Management Committee
- Create an accounting and financial procedures plan
- Develop guidelines designating which projects qualify for funding
- Identify funding sources for seed capital
- Establish procedures for tracking performance of funded projects
- Establish procedures for reinvesting project savings in new projects

No additional costs besides staff time will be needed to set up the revolving fund.

COMPLETE A GREENHOUSE GAS INVENTORY

A Greenhouse Gas (GHG) Inventory is an essential element of the City's sustainability baseline which will help the City to understand the magnitude and sources of GHG emissions. The GHG inventory will also allow Hallandale Beach to measure progress in GHG mitigation going forward and will identify the most significant emissions sources so the City can develop policies to address the issue. Completing an inventory will be the first step towards honoring the City's U.S. Climate Mayors commitment to uphold the Paris Climate Agreement, which was adopted on August 16, 2017 by Resolution 2017-91. This project will allow the City to create a targeted set of consistent policies, strategies and projects aimed at reducing emissions and establish goals for emissions reduction.

In late 2017, the City applied for grant funding to conduct the inventory through the Community Foundation of Broward's ECO Broward Grant. This proposal was unsuccessful, however staff will resubmit for funding in future grant cycles. Once funding is secured, the City will issue a Request for Quotes and select a qualified firm to develop the inventory for both local government operations and the community as a whole. The inventory will be based on established protocols such as those developed by the International Council for Local Environmental Initiatives (ICLEI), using web-based inventory software such as ICLEI's ClearPath tool. It will require a substantial data collection effort which will be integrated with sustainability data collected for the SAP.

The completed inventory will allow the City to benchmark GHG emissions against peer cities, forecast emissions trends under business as usual scenario and set informed and achievable emissions reductions goals. Costs of developing the inventory are estimated at \$24,500. Benefits include allowing the City to pinpoint facilities and infrastructure with above-average carbon footprints, potentially exposing inefficiencies that could lead to cost savings. The GHG Inventory will also give the City a reference point for evaluating the carbon mitigation benefits of potential sustainability projects to determine those opportunities that offer the best value to the City.





INTEGRATION INTO THE REGIONAL CLIMATE ACTION PLAN

The South Florida Regional Climate Change Compact (Compact) developed the Regional Climate Action Plan (RCAP) to guide coordinated climate action among the region's municipalities. The RCAP contains recommendations, guidelines for implementation, and best practices for local governments to act in concert with the regional agenda for greenhouse gas emissions reduction and climate resilience. The City of Hallandale Beach should aspire to regional leadership on climate action and intends to utilize RCAP as a benchmark for its success.

The most recent version of RCAP was released in December 2017. It contains approximately 76 recommendations for municipalities that are relevant to Hallandale Beach. According to the Compact, Hallandale Beach has completed 29 recommendations, or 38% of the total. An informal analysis indicates that the contents of this plan validates completion of about 35 additional recommendations, growing the total to approximately 64 recommendations completed, or 84% of total recommendations. Completing and implementing a Vulnerability Assessment and Adaptation Plan (VAAP), as recommended in this SAP, will be credited with a large majority of this increase.

As this living document develops, the City intends to continue to coordinate its planning with the Compact and the RCAP with the aim of completing 100% of its recommendations between 2022 and 2040.

REPORTING

This plan includes a suite of short-term goals and a portfolio of projects designed to blaze a path towards achievement. Accordingly, it is important to report on the City's progress as it moves towards 2022, when its short-term goals should be achieved.

Many cities that have established plans similar to this SAP report regularly on progress.

For example, the City of Fort Lauderdale published its Sustainability Action Plan in 2010. In 2015 it published a progress report that detailed goals it had achieved, the projects it had completed and the work that remains.

Aided by the KPIs established by the SAP long with the goals and projects within the Funding & Evaluation focus area that are designed to systematically measure them, the City plans to periodically publish updates to the SAP. The updates will report on progress towards achieving goals and the status of SAP projects.

These updates will also fulfill the intent of this plan to be a living document. The updates will provide the opportunity for new projects to be added to the SAP, as needed, to fulfill the City's vision to improve the quality of life in our resilient coastal community now and into the future.



FUNDING

The estimated budget for implementation of the 27 projects included in the SAP over five years is \$3.8 million, growing to \$5.4 million by year 10. The first year cost of the plan is \$340,000, growing to about \$1.3 million in 2019, then slowly leveling off thereafter.

Not all projects require investment. Nearly one third 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. These include Increase Fuel Economy, Right Size Fleet, Expanded Service Hours Work Week, Green Purchasing Programs, Bikeshare, Dune Protection, Low Impact Development, Communications Plan, Develop Green Event Policies, and Revolving Fund.

Implementation

TABLE 7: ESTIMATED SUSTAINABILITY ACTION PLAN BUDGET

Project	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total
LED Streetlights	\$64,333	\$64,333	\$64,333	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$193,000
LED Interior Lighting	\$0	\$0	\$0	\$41,000	\$41,000	\$0	\$0	\$0	\$0	\$0	\$82,000
Solar Thermal Systems	\$0	\$0	\$14,000	\$10,500	\$10,500	\$0	\$0	\$0	\$0	\$0	\$35,000
Existing Building Commissioning	\$80,000	\$0	\$0	\$0	\$0	\$80,000	\$0	\$0	\$0	\$0	\$160,000
Electric Vehicles & Infrastructure	\$0	\$27,864	\$27,864	\$0	\$0	\$0	\$0	\$0	\$0	\$12,500	\$43,229
Increase Fuel Economy	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Indoor Water Fixtures and Fittings Efficiency	\$0	\$10,000	\$12,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,000
HVAC controls	\$75,000	\$86,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$161,000
Right Size Fleet	\$32,513	\$32,513	\$32,513	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$97,539
Expand Reuse Water Projects	\$88,000	\$443,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$531,000
Expanded Service Hours Work Week	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Irrigation Efficiency	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$0	\$0	\$0	\$0	\$0	\$75,000
Increase Diversion of Residential Waste	\$0	\$550,000	\$550,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$3,200,000
Green Purchasing Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Composting	\$0	\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,000
Bikeshare	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Build out Bicycle and Pedestrian Infrastructure	\$0	\$10,000	\$170,000	\$280,000	\$270,000	\$0	\$0	\$0	\$0	\$0	\$730,000
Develop a Vulnerability/Adaptation Assessment	\$0	\$86,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$86,000
Dune Protection	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Impact Development	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Integrate Sustainability into Employee Training & Increase Employee Participation	\$0	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$31,500
Communications Plan	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Develop Green Event Policies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Utility Management System	\$50,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$77,000
Revolving Fund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Complete a GHG Inventory and Set Reduction Targets	\$0	\$25,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,000
STAR Communities Certification	\$0	\$4,000	\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$1,000	\$1,000	\$1,000	\$15,000
Total	\$339,820	\$1,345,185	\$828,185	\$654,000	\$644,000	\$387,500	\$310,500	\$307,500	\$307,500	\$295,000	\$5,419,189