



PRIORITY 4: ENVIRONMENTAL PROTECTION

PROTECT THE HEALTH AND LONGEVITY OF THE ISLAND AND ITS INHABITANTS

GOAL 1: ENERGY EFFICIENCY AND RESILIENCE

Pursue clean energy initiatives to reduce greenhouse gas emissions and increase participation in the circular economy.

Actions	Time Frame	Person(s)/Departments Responsible	Funding Notes
1. Energy Plan: Complete the Key West 10 Year Energy Plan, with a funding strategy and timeline, (to be approved).	Fall 2022	Sustainability and Energy Coordinators, SAB	None, staff time
2. Energy Use Map: Produce a City-wide Energy Use Map to determine energy usage and greenhouse gas emissions. Utilize results to identify cost saving and protective measures.	Fall 2022	Sustainability and Energy Coordinators in partnership with Keys Energy, SAB	None, staff time
3. Energy Efficiency in City Buildings: Conduct energy efficiency projects in 5 City buildings annually, (including LED lighting, energy sealing and insulation, and solar feasibility.)	Begin in Fall 2021, ongoing	Sustainability and Energy Coordinators, Engineering and Planning, HARC, SAB	FY21/22: \$12,000 (budgeted) \$50,000 annual budget
4. LED Streetlights: Continue to replace bulbs with the best ROI, (1,158 in total).	2022, ongoing	Engineering, Keys Energy	Cost TBD (Estimate was \$200,000, but reductions may be necessary)
5. Adhere to Resolution 19-328 on Solar Energy: Ensure that all development and redevelopment projects include options for solar energy. This should occur in the primary stages of project design through a checklist in Legistar. (As per goal 3.4)	Fall 2021, ongoing	Engineering, City Manager (through checklist), Planning, Planning Board	No cost



Key West Forward: Priority 4: Environmental Protection

<p>6. Waste Energy: Explore a waste energy facility that utilizes an anaerobic digester to manage food waste and produce energy.¹ Research facilities used by other municipalities and make a recommendation to City leadership.</p>	<p>Begin seeking option Winter 2023</p>	<p>Utilities, Engineering in partnership with Keys Energy and the Navy</p>	<p>On average the cost is \$20 million</p>
<p>7. Vehicle Electrification Readiness: Identify City busses and other City vehicles for electrification. Convene partners to set overall EV infrastructure goals. (See the Traffic and Pedestrian Friendliness Priority.)</p>	<p>Begin 2023</p>	<p>Transportation Coordination Team, Keys Energy and other partners</p>	<p>Funds TBD, in coordination with FDOT</p>
<p>8. Electric Charging Stations: Increase the number of electric charging stations throughout the island in accordance with Keys Energy’s plans (to install 10 stations.)</p>	<p>As per Keys Energy, (2022)</p>	<p>Keys Energy, Transportation, Parking, Sustainability Coordinator</p>	<p>FY22: Research/Staff Time FY23: Budget request TBD</p>

¹ This is a very costly endeavor, but one that would drastically alter expenditures on waste removal. Anaerobic digestion is processes by which microorganisms break down biodegradable material in the absence of oxygen. The process is used to manage waste and produce fuels that generate electricity and natural gas.



GOAL 2: RECYCLING AND COMPOSTING

Improve and increase participation the City’s recycling programs, and establish a composting capacity.

Actions	Time Frame	Person(s)/Departments Responsible	Funding Notes
<p>1. Wastewater Sludge Composting: Establish a composting wastewater facility that combines yard waste with sludge to create compost for community use.²</p>	Pilot in 2022	Utilities, Solid Waste Technician in partnership with FCAA	Approximate cost \$6 million in 2021-2022 budget
<p>2. Mandatory and Incentivized Recycling for Businesses: Require businesses to recycle cardboard and aluminum, and incentivize businesses to increase/improve recycling efforts through the following initiatives:</p> <ul style="list-style-type: none"> A. A “Green Business” Award and certification progress stickers for the windows of their storefronts; B. PR spotlights on “Green Businesses;” C. A City produced map for tourists identifying “Green Businesses” that participate in the recycling program; and, D. Shared accounts for small businesses. 	Summer 2022, ongoing	Sustainability and Energy Coordinators, Solid Waste Technician Waste Management, and Business Organizations (TDC, Chamber, Lodging, Business Guild, FLRA, Etc.,)	Suggested budget for awards, spotlights materials and map is \$15,000
<p>3. Enforce Ban on Single Use Plastics: Enforce resolutions 19-22 and 19-174 to ban plastic straws, and polystyrene products from City events and property, and work with private businesses to adopt similar practices. Explore options to incorporate the bans into all future and existing City leases.</p>	Begin exploring options Fall 2021	Sustainability Coordinator, Utilities, Code Enforcement, Business Organizations	No funding necessary

² The City currently pays \$3.1 million annually to haul trash and \$500,000 to haul sludge to the mainland. The sale of the compost could produce up to \$450,000 in revenue for the City annually, and would provide a valuable resource for the community.



<p>4. Multi-Family Housing: Coordinate with Waste Management and relevant owners/operators of multi-family housing developments to make recycling easier and more accessible to tenants. Explore “pay as you throw” options and free dump/pick up days for bulk items.</p>	<p>As negotiations with WM ensue, Summer/Fall 2021, ongoing</p>	<p>Waste Management, Utilities, Building, Key West Housing Authority, Owner/Operators of Multi-Family Housing</p>	<p>No funding required</p>
<p>5. Requirement of Plans for Recycling in all Development and Redevelopment Initiatives: Establish and enforce a requirement for all new and re-development projects to include plans for recycling.</p>	<p>Winter 2023</p>	<p>Legal, Planning, Building, Planning Board</p>	<p>No funding required.</p>
<p>6. “Love Your Island” Targeted PR Campaign: Create a short but powerful campaign several times per year to message the importance of recycling and keeping the island clean. Utilize banners in designated areas, social media, traditional press, and business organizations to spread the message. (See Priority on Cleanliness.)</p>	<p>Winter 2022, ongoing</p>	<p>PIO, Utilities, Solid Waste Technician, IT</p>	<p>As per the PIO’s PR budget</p>
<p>7. Recycling Materials in City Infrastructure: Explore and recommend to the Commission a program for the use of recycled materials in City infrastructure, including glassphalt or glasscrete and an array of recycled materials to be used in building construction. (As per the Solid Waste Master Plan.)</p>	<p>Summer 2022, ongoing</p>	<p>Engineering, Utilities, Sustainability Coordinator</p>	<p>No funding required for recommendation, but pursuing would require long term financial projections and plans</p>
<p>8. LEED Certification: Require new construction and redevelopment of City buildings to be LEED certified (gold for new, silver for redevelopment at a minimum). (As per the Energy Plan.)</p>	<p>With Energy Plan, 2022</p>	<p>Engineering, Building</p>	<p>3 -5% additional cost to any project</p>
<p>9. Green Procurement: Create a Green Procurement Policy to purchase goods and services with a reduced environmental impact.</p>	<p>Winter 2023</p>	<p>Finance, Sustainability Coordinator</p>	<p>No funding required</p>

GOAL 3: NEAR SHORE WATERS

Improve water quality and the cleanliness of near shore waters.

Actions	Time Frame	Person(s)/Departments Responsible	Funding Notes
<p>1. Screens on Outfalls: Continue to put screens on outfalls to prevent debris and garbage from entering the sewer system. Include on the City’s website a user-friendly explanation, (video or graphic), to explain how sewers function and how catch basins are cleaned.</p>	<p>Underway, 2021, ongoing</p>	<p>Utilities, IT</p>	<p>Budgeted through Utilities</p>
<p>2. Education for City Tenants and Liveboard Owners: Conduct public education efforts through targeted PR efforts with:</p> <ul style="list-style-type: none"> a. Restaurants and bars in the marinas that blow debris and garbage into the water; b. Liveboard owners to inform them of the free pump out; and, c. City tenants on recycling requirements (bans on plastic straws, and polystyrene.) 	<p>Fall 2022, ongoing</p>	<p>PIO, Utilities, Sustainability Coordinator</p>	<p>As per PIO PR Budget (Workshop might involve a nominal fee)</p>
<p>3. Water Quality Posting at City-Owned Beaches and on the City’s Website: Place signage on the beaches to inform visitors and residents when the water quality is poor.</p>	<p>Summer 2022</p>	<p>Public Works, Utilities</p>	<p>May require funding for signage, TBD</p>
<p>4. Neighborhood Watch/Key West Connect: Encourage community members to utilize Key West Connect when they witness individuals polluting waters.</p>	<p>Summer 2021, ongoing</p>	<p>PIO, IT</p>	<p>No funding required</p>



Key West Forward: Priority 4: Environmental Protection

<p>5. Bags and Trash Pick Up for Liveboards: Supply retailers throughout the island with bags for liveboards to deposit and contain their trash. Establish drop off points and pick up times with Waste Management for collection.</p>	<p>Fall 2022, ongoing (with education efforts)</p>	<p>Sustainability Coordinator, Public Works, Engineering</p>	<p>Price of bags TBD</p>
<p>6. Evaluate Wastewater and Sewer Systems for Repair: Upgrade and maintain systems as per DEP compliance program.</p>	<p>Summer 2021, ongoing</p>	<p>Utilities</p>	<p>In budget</p>
<p>7. Dive for Debris: Work with the College of the Florida Keys program to expand and encourage volunteers for their Dive for Debris Program.</p>	<p>Fall 2021, ongoing</p>	<p>Sustainability Coordinator, PIO, IT, CFK</p>	<p>No funding required</p>



GOAL 4: WATER EFFICIENCY AND RESILIENCE

Pursue water efficiency and reuse initiatives to reduce impacts on the City's potable water supply.

Actions	Time Frame	Person(s)/Departments Responsible	Funding Notes
1. Support Water Supply Plan: Pass and enforce upcoming Comprehensive Plan ordinances and mandates on irrigation schedules and water efficient fixtures.	Fall 2021, ongoing	City Commission Code, Building	No funding required.
2. Update City Buildings: Include water efficiencies alongside energy efficiency projects on 5 City buildings annually. (See goal 1, action item 3.)	Begin in Fall 2021, ongoing	Sustainability/Energy Coordinator	\$10,000 annually
3. Water Reuse Plan: Partner with FCAA to determine whether or not to pursue the recommendations of the 2019 and 2021/22 Water Reuse Studies including: a salinity intrusion study; estimates for UV disinfection and chlorine system upgrades; transmission main costs; and a more detailed analysis of alternatives.	Begin in Summer 2022, ongoing	Utilities, FCAA	No cost to explore the potential, but a water reuse plan would require a long term funding strategy
4. Protect Water Supply: Prevent an increase in salinity and keep water costs low by: a) Continuing to support FCAA legislatively in legal battles with Turkey Point remediation plans and consent orders; b) Implementing the Water Supply Plan to reduce water consumption; and, c) Increasing the number of cisterns in new building initiatives.	Current, ongoing	Adaptation Planning Team, FCAA	Lobbyist time



GOAL 5: CAPACITY, ACCOUNTABILITY AND PARTNERSHIPS

Increase the collective capacity of organizations to enforce regulations that protect the local environment.

Actions	Time Frame	Person(s)/Departments Responsible	Funding Notes
<p>1. Increase Street Cleaning Capacity: Plan for and fund the following positions:</p> <p>A. <u>Street Sweeper and Near Shore Water Crew/Individual</u> to clean streets, and collect litter in the mangroves and shoreline.³</p> <p>B. <u>Part Time Solid Wastewater Technician</u> (as per the priority on Cleanliness – Utilities)</p> <p>C. <u>Code Enforcement Specialist on Cleanliness</u> (as per the priority on Cleanliness – Code)</p>	<p>2022/23</p> <p>2021/22</p> <p>2021/22 (Done)</p>	<p>Public Works</p> <p>Utilities</p> <p>Code</p>	<p>Avg. \$50K per person, per year</p> <p>Completed/funded</p> <p>Completed/funded</p>
<p>2. Keep Key West Beautiful/Adopt a Spot: Work with a Volunteer Leader and the Solid Waste Technician to organize individuals, civic groups, and businesses to adopt spots on the island that they clean and maintain. The Volunteer Leader will create a master schedule and coordinate with participants. (See priority on Cleanliness.)</p>	<p>Begin in Fall 2021, ongoing</p>	<p>Assistant City Manager to identify and work with Volunteer Leader. Solid Waste Technician, PIO, City Manager</p>	<p>May require some funding for clean up supplies, TBD</p>
<p>3. Increase Littering Fines: Re-evaluate and increase current littering fines and ensure accountability.</p>	<p>Spring 2021</p>	<p>Finance, Code Enforcement, KWPD, City Manager</p>	<p>No funds required</p>

³ This initiative is in the Cleanliness plan for 1 street sweeper in 2022-23. It may be necessary to consider more than one person (E.g., a 3-4 person crew).



<p>4. Department Checklists: Establish checklists for all relevant Commission resolutions to ensure that all initiatives incorporate energy efficient directives. Integrate the checklists into Legistar.</p>	<p>Fall 2021</p>	<p>All relevant departments, Planning</p>	<p>No funding necessary</p>
<p>5. Training and Resources for Landscapers, Electricians, Contractors and Plumbers: Train professionals and request agreements to adhere to proper waste disposal and recycling practices. Ensure that the Building and Licensing Departments share resources with relevant information.</p>	<p>Spring 2022, ongoing</p>	<p>Building, Licensing, and partnership with Monroe County Extension Service</p>	<p>Costa associated for trainers TBD</p>
<p>6. Lease Agreements: If possible, introduce into all business leases from the City the requirement to manage waste, including recycling, and proper waste removal.</p>	<p>Begin in Spring 2022</p>	<p>Legal</p>	<p>No funding necessary</p>
<p>7. Clean Marinas: Work with all private marinas, boatyards and retailers in Key West to join the FDEP’s Clean Marina/Boatyard/Retailer program and achieve the designated status.</p>	<p>Begin in Winter 2022, ongoing</p>	<p>Ports, PIO</p>	<p>No funding necessary</p>
<p>8. Enforcement and Accountability Partnerships: Bring together relevant partners (Coast Guard, Navy, Sherriff’s Marine Unit, KWPD Marine Unit, FWC, Non Profits), in a series of workshops to identify shared efforts to prevent littering of near shore waters and to improve the enforcement of regulations.</p>	<p>Summer 2022</p>	<p>City Manager with partners</p>	<p>No funding necessary</p>
<p>9. Workshop on Green Businesses: Organize a workshop with businesses to identify strategies and collaborative efforts to contribute to the cleanliness and environmental wellness of the island.</p>	<p>Winter 2022</p>	<p>City Manager with partners</p>	<p>No funding necessary</p>
<p>10. Water Quality Protection Program: Monitor and implement the 2021 recommendations, and ensure that City leadership is involved in meetings and educational opportunities for municipalities.</p>	<p>Fall, 2021, ongoing</p>	<p>Sustainability Coordinator, Utilities</p>	<p>Funds for participation in workshops TBD</p>