

Environmental Sustainability Plan September 2016

Islamorada, Village of Islands

In order to contribute to a greener planet, the Village of Islamorada seeks to enact policies to reduce global warming pollution levels and provide economic and quality of life benefits such as reduced energy bills, green space preservation, air quality improvements and energy conservation.

The Environmental Sustainability Plan was implemented in September 2007 and is updated on an annual basis.

This document includes actions that are currently in place and goals/actions that have been identified to be investigated for future implementation. The document is intended to be utilized as a tool to review sustainability actions that have been achieved and to identify and prioritize goals that may be accomplished in the next year and future years.

This document is designed to be reviewed annually to add/remove/modify the goals, update the status of items that have been implemented and identify those items that could be considered for implementation during the following fiscal year.

<u>Environmental Sustainability Goal/Action</u>	<u>Status</u>
ENERGY	
Include LEED energy certification components in plans for new Village building projects.	Included energy efficient fixtures and equipment as practicable and cost effective for 2007 building projects (Community Center, Restroom Pavilion and Fire Station 19). Administrative Center & Public Safety Headquarters is constructed with an energy efficient roof and energy efficient windows.
Include LEED energy certification components in plans for Village building renovations.	
Utilize energy efficient mechanical systems in building projects.	Included energy efficient equipment as practicable and cost effective for 2007 building projects (Community Center, Restroom Pavilion and Fire Station 19). Administrative Center & Public Safety Headquarters was constructed with energy efficient air conditioning.

Include energy saving standards in the BPAS scoring system.	In place prior to September 2007.
Encourage use of solar / photovoltaic systems by Islamorada property owners and investigate additional LEED energy certification standards for addition to the BPAS scoring system to promote increased energy savings in new development (i.e. solar hot water heating, “going off the FKEC grid”).	Adopted Resolution 08-12-107 in December 2008 to waive building permit fees for solar / photovoltaic system installation. Additional points for solar hot water heaters included in BPAS scoring system in October 2010.
Keep room temperatures no lower than 74 degrees during business hours and turn thermostats up to 78 degrees during non-business hours in all Village Buildings with limited exceptions (i.e. areas housing computer server systems).	Included in 9/26/08 Employee Policy update.
Install motion-sensing, auto-off light switches where appropriate at Village owned buildings.	Motion-activated lighting installed in Marina Restroom Pavilion and in the Community Center restrooms. Motion-activated lighting installed in Administrative Center and Public Safety Headquarters building in areas other than hallways and partitioned areas. Retrofitting of Anne’s Beach and Library Beach restroom lighting completed during FY 09-10.
Create and implement an Environmental Sustainability Policy for Village Employees (“Employee Policy”).	Employee Policy implemented 5/22/08, and is updated as new information becomes available.
Establish an energy conservation program/policy for all Village offices and buildings to include turning off lights and equipment when not in use.	Implemented during FY 07-08 through the Employee Policy.
As new equipment and appliances are required, procure energy efficient products that are ENERGY STAR® qualified or that are certified under the Federal Energy Management Program unless the products are shown not to be cost-effective on a life-cycle cost basis.	Implemented during FY 07-08 through the Employee Policy. Purchasing Policy and Procedure to be updated during FY 15-16.
Require affordable housing projects receiving Village assistance to install ENERGY STAR® qualified appliances.	To be addressed by resolution. Gorman & Company installed ENERGY STAR® qualified appliances in Wet Net Villas affordable rental development (began leasing in 2013).
Implement measures to reduce electrical requirements for pool temperature management.	Pool cover installation completed October 2009.

	<p>Phased replacement of old heat pumps with higher efficiency units began during FY 09-10 with the replacement of four of the eighteen heat pumps.</p> <p>Two additional heat pumps purchased during FY 10-11.</p> <p>Installation of propane flash heater to reduce run-time of heat pumps during cold weather installed FY 11-12.</p> <p>FY 13-14 budget includes the purchase of the final six pool heat pumps to replace the remainder of the original and older inefficient units.</p>
Replace Founders Park street lights with solar lighting.	Energy Efficiency and Conservation Block Grant retrofit of Founders Park Street lighting (and other lighting on Village-owned properties) to solar lighting completed during FY 11-12.
Utilize solar power to light “Welcome to Islamorada” signs at the north and south entrances to the Village.	In place prior to September 2007.
Manage Founders Park street lights for lowest possible energy use.	In place September 2007.
Utilize state of the industry standards/practices for Founders Park field lighting.	In place September 2007.
When possible, make arrangements for meetings to occur via conference call rather than having all participants drive to the meeting location.	Policy initiated August 2008 and included in updated Employee Policy.
Reduce overall electrical consumption for municipal offices and parks utilizing the methods listed in this section.	Reduced electrical consumption for municipal offices and parks by 11% during FY 08-09. Methods to reduce electrical consumption have continued.
Seek funding assistance for “ENERGY” goals / actions identified above as appropriate.	During FY 09-10, staff worked with the County to apply for funding through the State of Florida American Recovery and Reinvestment program / Energy Efficiency and Conservation Block Grant program. Grant approved in July 2010; retrofit completed during FY 11-12.
Phase out incandescent lighting and update to LED lighting in all Village buildings and properties.	<p>In June, 2015, staff submitted application for financial assistance to purchase additional cloth bags for <i>Got Your Bags? Florida Keys</i> initiative. Did not win grant award.</p> <p>By 2013, all incandescent lighting has been replaced in Village buildings with the exception of Green Turtle Hammock Park which is currently undergoing renovations by the non-profit Operator.</p> <p>Installation of LED lighting to replace incandescent and fluorescent lighting began during FY 15-16 and will be completed during FY 16-17.</p>

LAND/SHORELINE

Protect the shorelines and implement shoreline stabilization projects.	In 2004, the Village installed and continually maintains 135, “no wake” buoys 300 feet from the shoreline, oceanside and bayside, to protect the shallow flats in the nearshore waters and to protect the shoreline from erosion caused by boating activities.
Maintain and expand healthy tree canopies over certain roadways to provide for greater shade to residential areas for energy savings and to promote groundwater absorption.	In place prior to September 2007 and ongoing.
Coordinate with FDOT to re-sod US 1 highway rights-of-ways rather than placing compacted lime rock. The sod may need to be protected with hedge materials.	<p>Rights-of-way on Plantation Key sodded by FDOT following 08-09 roadway improvement projects.</p> <p>During FY 12-13 the Snake Creek Bridge to MM 87.3 FDOT US 1 beautification project was completed.</p> <p>During FY 15-16, the MM 81.47 to 85.59 FDOT landscaping project was completed.</p>
Ensure proper maintenance of native vegetation removal of invasive exotic vegetation.	<p>To sustain native vegetation, Public Works staff receive ongoing training on invasive exotic recognition and removal techniques as well as herbicide and arborist training throughout the year.</p> <p>FY 14-15 budget included new employment position of Environmental Resource Program Manager. Expertise provided by this staff member to be available to Public Works employees.</p>
Replace asphalt with pervious pavers/pervious materials where possible on publicly held land and utilize pavers/pervious materials instead of non-pervious materials for new projects.	<p>Pervious parking area (gravel) installed as part of Green Turtle Hammock improvements with grant funding during FY 10-11.</p> <p>Pavers installed for public walkway at the Key Tree Cactus Preserve grant-funded improvement project in FY 15-16.</p>
Add rain barrels/cisterns to key properties to capture rainwater, allowing the water to be used for landscaping.	Cistern installed at Fire Station 19 during FY 07-08.
Revise right-of-way ordinance to ensure that swales are vegetated and kept free from debris and minimize traffic that would compact soils and reduce permeability.	Revisions drafted during FY 11-12; to be proposed in amended ROW ordinance during FY 16-17.
Preserve properties from development through conservation easements and agreements with Monroe County and the State of Florida.	<p>Over 58 acres of property acquired prior to September 2007.</p> <p>“Key Tree Cactus Preserve” (nine acres) acquired during FY 08-09 for conservation and recreation.</p>

	<p>Three Plantation Key properties (approximately 1.5 acres) acquired for conservation during FY 13-14.</p> <p>One Plantation Key property acquired for conservation during FY 14-15.</p> <p>As of September 2015, a total of 65.3 acres of conservation property and 105 acres of Park property is owned by the Village.</p> <p>Additional properties continue to be considered for conservation.</p>
<p>Work with schools, various community agencies and citizens' advisory committees for the planting of trees and greenery at Village parks and properties.</p>	<p>In place prior to September 2007 and ongoing.</p> <p>Small projects are completed regularly and during FY 12-13, the Village's Landscape Advisory Committee worked in coordination with Public Works and the Florida Keys Electric Cooperative to complete a substantial planting project - 224 total plantings - at Plantation Tropical Preserve.</p> <p>Project to cultivate specialized native plants initiated through the Landscape Advisory Committee in May 2015. Plants to be utilized at Village properties.</p> <p>During FY 15-16, Landscape Advisory Committee grew and planted over 300 native plants, many species listed with special status as endangered and threatened. Plants were installed with the assistance of the Florida Keys Electric Cooperative on the Key Tree Cactus Preserve property as part of specific project to create bufferyard plantings along adjacent property.</p>
<p>Require businesses that use rights-of-way to plant or re-plant vegetation and trees.</p>	<p>Update of Chapter 50 of the Village Code to include a planting / restoration provision for use of right-of-way revisions drafted in FY 11-12 to be proposed in amended ROW ordinance during FY 16-17.</p>
<p>Work with utility companies to restore vegetation, including re-sodding and tree planting.</p>	
<p>Work with neighborhood associations with culs de sac or streets ending in water for potential planting ideas to install landscaping to improve barren areas.</p>	<p>Completed two cul de sac improvements with landscaping during FY 07-08.</p> <p>Two additional cul de sac improvements completed during FY 08-09.</p>
<p>Provide more shaded walkable/bikeable lanes and communal parking by utilizing concepts in the US Post Office / Townsite Supermarket proposed project as shown in the 2003 TSM Study for downtown Islamorada.</p>	
<p>Provide more shaded walkable/bikeable lanes by utilizing concepts in the Worldwide Sportsman Store / Islamorada Fish Company proposed project as shown in the 2003 TSM Study for downtown Islamorada.</p>	

Provide more shaded walkable/bikeable lanes and communal parking
Village-wide parking along US Highway 1 by utilizing concepts as
shown in the 2003 TSM Study for downtown Islamorada.

AIR QUALITY/CO2 REDUCTION

Identify locations to strategically plant native canopy trees that would provide ample shade with its canopy to cool temperatures and reduce air pollution. Plant six trees per year in public parks and rights-of-way.	In place prior to September 2007 and ongoing. FDOT MM 81.47 to 85.59 landscaping project includes shade trees.
Require additional landscaping and buffers for projects requiring development orders.	In place prior to September 2007.

STORMWATER

Village's stormwater master plan completed in 2001 and transmitted to officials at FDOT and FDEP.	In place prior to September 2007.
Meet with FDOT on a regular basis to coordinate and review work performed by the FDOT.	In place prior to September 2007 and ongoing.
Make requests to FDOT for improvement projects.	In place prior to September 2007 and requests are made annually.
Complete remainder of the paving and drainage improvements on Upper Matecumbe Key.	Construction completed during FY 08-09.
Utilize Stormwater Best Management Practices for drainage improvements.	In place prior to September 2007 and ongoing.
As part of the work to install driveway connections, swales, or similar method of stormwater management is currently required by Code.	Requirement included in the Village Code prior to September 2007.

WATER USE

Low flow plumbing fixtures are in place in the Founders Park pool complex and Fire Station 20.	In place prior to September 2007.
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LEED certification components (i.e. waterless toilets) could be utilized for additional water savings in new municipal building projects.	Included low pressure faucets, shower fixtures and minimum volume toilets wherever practicable in 2007 building projects (Community Center, Restroom Pavilion and Fire Station 19), to reduce water use and expenditures. Low flow (0.5 gallons per minute) sensor operated faucets in restrooms and a low flow (1.0 gallons per flush) urinal installed during construction of Administrative Center & Public Safety Headquarters.
Utilize the minimum level of water necessary for Founders Park fields and landscaping to be properly maintained for use and for the pool and other facilities to function properly.	In place September 2007.
Include water savings standards in the BPAS scoring system.	In place prior to September 2007.
Investigate additional LEED certification standards for BPAS scoring system.	Additional LEED certifications standards considered; will not be included in BPAS scoring system due to difficulty with implementation.
Install pool cover at Founders Park pool (for an estimated reduction of 10 to 20% water usage for the pool).	Pool cover installation completed October 2009.
Utilize native plants at Village project sites.	Only native plants were utilized in landscaping installed during FY 09-10 for the Administrative Center and Public Safety Headquarters resulting in no landscape irrigation. Site specific native vegetation to be installed at all of the proposed wastewater pump station sites to be constructed beginning 2013. Wet Net Villas affordable rental housing project completed in 2013 includes native plants and low-water plants, resulting in no irrigation requirements.

WASTE

Create and post additional recycling information on website.	Information regarding recycling and environmental sustainability posted in new section of website beginning December 2008 and updated as new recycling opportunities become available.
Provide recycling bins up at public parks in Village.	Recycling pick-up and disposal services for parks included the solid waste contract beginning FY 08-09. Mixed recycling/trash containers purchased and installed Village-wide during FY 09-10.
Include alternatives for recycling in solid waste contract.	Beginning October 2008, solid waste contract includes additional residential and commercial recycling and initiatives.

	<p>Solid Waste contractor added the collection of electronics for recycling during FY 09-10.</p> <p>2013-2018 Solid Waste Services Agreement requires the Contractor to implement mandatory recycling for commercial customers following adoption of a mandatory recycling ordinance.</p>
Improve collection and proper disposal of hazardous waste materials.	2013-2018 Solid Waste Services Agreement increased Household Hazardous Waste Collection days to four per year and included requirement for Contractor to provide for used motor oil collection.
Establish a recycling program at all Village facilities and encourage recycling by all residents, staff and visitors.	In place September 2007 and included in Employee Policy.
Require Village staff to print and copy double-sided when possible.	In place September 2007 and included in Employee Policy.
Require Village staff to utilize electronic documents rather than printed documents when appropriate.	In place September 2007 and included in Employee Policy.
Distribute Village meeting packets electronically or as double-sided prints when appropriate.	<p>Began making double-sided prints for Council agenda packets in September 2007.</p> <p>Paperless agenda preparation process was implemented in July 2011.</p> <p>Paper copies of the agenda provided to the public on request only beginning September 2011.</p> <p>Transition to paperless agenda use by Council tested during FY11-12. Will identify more suitable devices for paperless agendas in the future.</p>
Utilize trash bags made of recycled material at Village Parks and Village properties.	Implemented April 2008.
Utilize trash bags made of recycled material in Village Office Buildings.	Implemented June 2008.
Include a requirement in the <i>Village-owned Parks Special Events Policy</i> for mandatory recycling at events at Village parks.	Implemented June 2008.
Include a condition in the temporary use permit application for mandatory recycling at permitted events.	Implemented June 2008.
Encourage recycling at Vacation Rental properties.	Beginning August 2010, recycling information provided with license as well as information to assist renters with contacting the Solid Waste provider for delivery of additional recycling containers.

	During FY 14-15, improved measures to promote recycling with increased communication during registration renewals and laminated flyers encouraging recycling for posting at vacation rental properties.
Promote voluntary use of reusable bags by businesses in Islamorada and residents.	Bags purchased FY 13-14 to begin promoting voluntary use of reusable bags through <i>Got Your Bags</i> program. Efforts expanded during FY 14-15 to include outreach to retailers.

TRANSPORTATION / FUEL

Develop a Bicycle/Pedestrian Transportation Master Plan (Comprehensive Plan Policy 2-1.5.1).	Plan adopted October 2007.
Coordinate with FDOT to pave or sod specific areas along bike path within FDOT right-of-way to minimize impact to bike lanes from highway traffic.	<p>Sodding completed on Plantation Key during FY 08-09 as part of FDOT construction projects.</p> <p>Sodding completed on Lower Matecumbe Key during FY 08-09 as part of FDOT construction projects.</p> <p>FY 11-12 sod installation included area adjacent to bike trail at MM 80.5, along southbound lane of Tea Table and adjacent to the northern section of bike trail on Lower Matecumbe Key.</p> <p>FDOT projects for Upper Matecumbe Key and Windley Key (MM 81.5 to 85.5) completed FY 15-16 included widening the shared use path and landscape installation.</p> <p>FDOT Project from MM 77.5 to 81.5 to include shared use path widening and landscape installation to be completed early 2017.</p>
Purchase or lease vehicles with the highest fuel efficiency that are appropriate for the assigned task.	<p>\$50,000 budgeted for Capital Replacement Fund to begin replacement of inefficient fleet vehicles in FY 08-09 and FY 09-10. Funds will be appropriated annually.</p> <p>First hybrid vehicle purchased in May 2009.</p> <p>During FY 16-17, evaluation of entire Village fleet to be conducted. Evaluation to include consideration of fuel-efficient, hybrid and electric vehicles.</p>
Auction retired Sheriff's Department vehicles and other vehicles that are not fuel efficient for Village tasks.	<p>Auctioned six inefficient fleet vehicles in March 2009.</p> <p>Auctioned 17 inefficient fleet vehicles in 2011.</p> <p>Auctioned six inefficient fleet vehicles in 2014.</p>

Have extremely inefficient vehicles destroyed for scrap to permanently remove them from the roadways.	In 2012, two inefficient fleet vehicles were removed from fleet for destruction (utilized for fire rescue training).
Implement anti-idling policy throughout all Village departments.	In place September 2007.
Encourage Village staff to carpool, rideshare, bike or walk to work, as appropriate.	Implemented during FY 07-08 through the Employee Policy.
Reduce vehicle usage; utilize pool vehicles rather than individual vehicles when practicable.	<p>Reduced municipal vehicle fleet by four vehicles during FY 08-09.</p> <p>Continued practice of lowest possible number of fleet vehicles in use</p> <ul style="list-style-type: none"> ○ 19 vehicles in use at FY 10-11 end ○ 21 vehicles in use at FY 11-12 <p>During FY 10-11, purchased two bicycles for Park and Public Works staff use between Park office and Administrative offices.</p>
Encourage the use of electric vehicle use by providing facilities for employees, residents and visitors to charge electric cars at municipal sites.	<p>During FY 14-15, staff to seek grant funding to install electric car charging stations at the Administrative Center, Pool Facility, Southwinds Park and/or Morada WayArt District area. Grant funding not available for this use during FY 14-15 or years since; will continue to seek funding.</p> <p>During FY 16-17, Code amendments to be drafted to provide regulations for electric vehicle charging facilities.</p> <p>During FY 16-17, staff to propose project, funding plan and fee policy for electric car charging stations at the Administrative Center and Founders Park near Pool Facility. Staff to research new federal government actions to accelerate the deployment of electric vehicle and charging infrastructure announced in July 2016 with regard to possible funding that may become available through the collaborative initiative with the Department of Energy and Department of Transportation.</p>

WATER QUALITY

Continue environmental practices of the Clean Marina Program.	Received Clean Marina designation for Plantation Yacht Harbor Marina in 2004. Five-year Clean Marina Award received in April 2009. Ten-year Award received April 2014.
Implement and continue Canal Restoration Demonstration Program.	During FY 12-13 Began participation in Florida Keys National Marine Sanctuary Water Quality Protection Program Canal Restoration Advisory Subcommittee. Began participation in three-year grant from EPA for monitoring of the canal demonstration projects. Council approved \$100,000 for evaluation and installation of program. Council adopted resolution

	<p>approving the top ten demonstration canal projects in rank order. Consultant further evaluated and compiled comprehensive report listing top ten projects ready for implementation.</p> <p>FY14-15 First canal restoration demonstration project was completed and installed at Treasure Harbor. Monitoring ongoing.</p> <p>FY15-16 Completed and posted an informational video outlining the restoration projects throughout the Keys and highlighting the installation of the first project. Began design/permitting for second canal demonstration project with collaborative effort between Village and homeowner. Obtained a grant from the Department of Environmental Protection toward completion of third demonstration project within the Village. Monitoring ongoing.</p>
Complete Village-wide wastewater collection and transmission system	<p>During FY 15-16, the Village-wide wastewater collection and transmission system was completed, satisfying the state requirement for advanced wastewater treatment throughout the Village. The over \$160M project permitted the decommissioning of outdated package plants, failing septic systems and cesspools thereby providing water quality improvements to canals and near shore waters and protecting the rich biological communities within those waters.</p>
Participate in vessel pump-out program.	<p>Since 2014, the Village participates in a Monroe County-wide vessel pump out program providing approximately 1,800 – 2,000 pump outs per month county-wide, 250 – 300 per month Village-wide, to enhance water quality.</p>

OTHER

Improve community awareness of environmental sustainability initiatives undertaken by the Village and encourage community involvement.	<p>News box added to Village website in December 2008 includes Village sustainability initiatives and informational links is updated when new sustainable actions are implemented or new opportunities become available.</p> <p>Community education program included in Solid Waste contract approved in October 2008.</p> <p>Increased advertising, additional direct public relations presentations to school groups, community groups and the media to promote recycling are included in 2013 Request for Proposals for Solid Waste Services draft agreement.</p> <p>In conjunction with implementation of mandatory commercial recycling, a new position - Sustainability Coordinator - may be recommended.</p>
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Implement a climate change adaptation plan.

During FY 13-14, the Village entered into an Agreement with a consultant to create an adaptation (sea level rise) action plan specific to Islamorada.

Final draft of climate adaptation action plan, *IslamoradaMatters* and website *IslamoradaMatters.com* completed and transmitted to the Village August 2016. Additional environmental sustainability measures and initiatives identified in *IslamoradaMatters* will be incorporated into this document.