

# Palm Beach County Green Task Force on Environmental Sustainability and Conservation



Report to the  
Board of County Commissioners

July 2009



## ACKNOWLEDGEMENTS

The Palm Beach County Green Task Force would like to acknowledge and thank County Administration, the Department of Environmental Resources Management, the Palm Beach County Planning Zoning and Building Department and the Facilities Development and Operations Department who assisted us and provided input throughout the year-long process of creating this report.

Special thanks to the numerous County staff who attended the Task Force and subcommittee meetings, made presentations, and developed supporting data for the work of the Task Force and to the Office of the Clerk and Comptroller for recording Task Force Meetings and managing meeting minutes.

And finally, a thank you to the Palm Beach County Board of County Commissioners for creating the Task Force and allowing the citizens of Palm Beach County to help establish a sustainable future for Palm Beach County.

*Please note that this document is intended to be viewed electronically to limit the need for printing. References are available throughout the document when noted by "Click Here." These are live links and will launch the referenced document when an Internet connection is available. If printing is necessary, the document is formatted for double-sided printing.*



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**PALM BEACH COUNTY GREEN  
TASK FORCE ON ENVIRONMENTAL  
SUSTAINABILITY AND  
CONSERVATION**

**EXECUTIVE SUMMARY**

**JULY 2009**



# **PALM BEACH COUNTY GREEN TASK FORCE ON ENVIRONMENTAL SUSTAINABILITY AND CONSERVATION**

## **EXECUTIVE SUMMARY OF REPORT TO THE BOARD OF COUNTY COMMISSIONERS**

**JULY 2009**

### **SUMMARY CONCLUSIONS**

- The County has explored a number of green issues and is implementing a number of green policies. The County and its staff should be commended for these efforts.
- The green efforts are, however, somewhat sporadic, generally lacking the direction, and therefore effectiveness, of a Countywide sustainability effort.
- There is significant room for improvement both in the implementation of previous reports that have been delivered to the Board of County Commissioners (e.g. Alternative Energy Task Force and Office of Economic Development), and in the coordination of green efforts that are already being implemented.
- There are potentially significant cost savings that could be generated from a variety of policies.
- There is the potential for significant economic development within the County as the green economic sector grows.
- Ultimately, this Task Force could generate an almost limitless list of green ideas to pursue....and as fast as the green world changes, many of those ideas would could soon be outdated by the time they are delivered in a report. This Task Force has generally learned that staff and officials know best how to implement the County's programs, and thus how to best develop policies...but sustainability is not integrated into the County's process. The success of the County's sustainability initiative, therefore, ultimately rests far more upon the ability of the County to truly integrate green philosophy into every day policies, actions, and mindsets, rather than upon the ability of Task Forces such as this one to generate ideas and reports. It seems that the fact that so many task forces focused on green issues have already overlapped and repeated investigations, while accomplishing very little actual change, would support this conclusion.

## **GREEN TASK FORCE OVERVIEW**

On June 3, 2008, the Palm Beach County Board of Commissioners adopted Resolution R-2008-1007 Appointing a Green Task Force on Environmental Sustainability and Conservation, whose mission was:

*“to identify actions and policies that can be implemented by the Board of County Commissioners to encourage healthier, more resource efficient and more sustainable buildings, energy and natural resources conservation and environmental sustainability.”*

The Task Force was divided into subcommittees in the following areas:

- Government
- Energy
- Green Building
- Environment
- Education

The final report outlines the top 3 recommendations that emerged from each subcommittee.

## **ECONOMIC, ENVIRONMENTAL, AND POLITICAL CONTEXT**

It is important to understand how the County’s efforts fit into the growing green dialogue. There has been and continues to be rapid change in a variety of areas impacting the County government in the following areas:

- Economic opportunities through conservation and economic development
- Increased concern about pressures on environmental resources
- Significant political changes at the Federal, State, and Local levels

## **CURRENT COUNTY GREEN INITIATIVES**

The Task Force learned that Palm Beach County has already undertaken and implemented a number of green initiatives. Of note as well is that the Task Force realized there were a lot of efforts throughout the County, however, these efforts were not coordinated in an organized manner. This led to concern on the

part of the Task Force that efforts were being duplicated as different parts of the organization explored similar topics and policies. Details of the following can be found in the complete report:

- County Internal Green Audit and Summary Report
- Alternative Energy Task Force
- Office of Economic Development
- Water Task Force
- Land Development Regulation Advisory Board
- Palm Beach County Schools

## RECOMMENDATIONS

As noted, the top 3 recommendations to emerge from each subcommittee were included in the Report. These are outlined below. Details on these proposals are found in the complete Report.

<b>SUMMARY TABLE OF TASK FORCE RECOMMENDATIONS BY SUBCOMMITTEE AND DEPARTMENT</b>
<b>Government Subcommittee Recommendations</b>
<u>Recommendation 1:</u> Establish and Incorporate a Sustainability Administrative Infrastructure into County Administrative Operations
<u>Recommendation 2:</u> Establish a Financial Tracking Mechanism
<u>Recommendation 3:</u> Establish Comprehensive Countywide Energy Conservation and Green House Gas Emission Reduction Strategy (ECS) to Reduce Both Energy Consumption and Green House Gas Emissions (GHGE).
<b>Energy Subcommittee Recommendations</b>
<u>Recommendation 1:</u> Advocate for a Solar Rebate Program for Solar Water Heaters
<u>Recommendation 2:</u> Establish a Horse Manure Anaerobic Digestion Facility in the County
<b>Green Building Subcommittee Recommendations</b>
<u>Recommendation 1:</u> Mandate Recycling of Construction Waste
<u>Recommendation 2:</u> Create a Green Building Incentive Program for Private Developers
<u>Recommendation 3:</u> Create an Exemption from Architectural Guidelines for Green Buildings
<b>Environment Subcommittee Recommendations</b>
<u>Recommendation 1:</u> Commit to Long-term Support of and Funding for the Existing Conservation Lands Maintenance Program
<u>Recommendation 2:</u> Develop Policies to Preserve Agricultural Zoning and Encourage Urban Gardening
<u>Recommendation 3:</u> Develop and Implement Incentive Programs for Xeriscaping and Permaculture
<b>Education Subcommittee Recommendations</b>

Recommendation 1: Fund and Help to Organize the Annual Green, Energy, and Climate Conference / Expo

Recommendation 2: Develop and Maintain a Permanent Green Column on the Palm Beach County Government Website

Recommendation 3: Establish Green Collar Economy Enterprise / Cultural Training Centers Throughout Palm Beach County

**SECTION A:**

**CONTEXT**



# CHAPTER 1: TASK FORCE OVERVIEW

## RESOLUTION TO APPOINT A TASK FORCE

On June 3, 2008, the Palm Beach County Board of Commissioners adopted R-2008-1007 Appointing a Green Task Force on Environmental Sustainability and Conservation. ([Click Here](#) for Complete Resolution)

## MAKEUP AND MEMBERS

The Task Force makeup and members were as follows:

SEAT	APPOINTEE
One (1) County Commissioner serving as Chair	Commissioner Shelley Vana (District 3 Commissioner) (replaced Commissioner Bob Kanjian)
Seven (7) citizens with expertise in building construction, energy management, environmental management, real estate, economic development, or community affairs nominated by individual commissioners.	Mark Queenan (District 1)
	Tricia Ward Waldman, CCIM (District 2)
	Greg Rice (District 3)
	Susan Haynie, Deputy Mayor, Boca Raton (District 4)
	Maria Lorts Sachs, State Representative (District 5)
	Mark Beatty, AIA LEED AP (District 6)
	Andrew Luchey (District 7)
One (1) municipal representative nominated by the League of Cities	Charles J. McCrosson, Vice-Mayor, Town of South Palm Beach
One (1) member of the South Florida Chapter of the United States Green Building Council	Joseph Snider, AIA LEED AP
Two (2) members recommended by environmental organizations registered as 501(c)(3) entities active in Palm Beach County	Jayne King
	Cynthia H. Plockelman
One (1) licensed professional architect LEED Accredited	Maureen Kussler, LEED AP (consultant non-architect)
One (1) licensed attorney, LEED Accredited Professional and Florida Bar certified in construction law.	Bruce Loren (resigned 3/5/09)
One (1) licensed professional engineer	Dr. Richard Goodwin, P.E.
One (1) licensed professional residential builder	Jon Peter "JP" DiMisa
One (1) licensed professional commercial builder LEED Accredited	John Banting, LEED AP
Director of the County Planning, Zoning and Building Department, or designee (non-voting)	Barbara Pinkston-Nau (designee)
Director of the Department of Environmental Resources Management, or designee (non-voting)	Bonnie Finneran (designee)
Director of the Facilities Development and Operations Department, or designee (non-voting)	Jimmy Beno (designee)

## **MISSION**

Resolution R-2008-1007 defined task Force was defined as:

*“to identify actions and policies that can be implemented by the Board of County Commissioners to encourage healthier, more resource efficient and more sustainable buildings, energy and natural resources conservation and environmental sustainability.”*

## **HISTORY**

The Task Force held its first meeting in September of 2008, and met approximately one to two times per month through June of 2009. The Task Force chose to organize itself into 5 subcommittees which met separately, reporting back during full Task Force meetings. Those subcommittees and its members were as follows:

- **Government**

- Joe Snider AIA, LEED AP

- Nancy Byrne, Assistant Director of Development, City of Boynton Beach

- John Banting, LEED AP

- Renee Varella

- Cynthia Plockelman, Environmental Advocate, member of Audubon Society, Native Plant Society

- **Energy**

- Dr. Richard Goodwin, P.E.

- Dan Kozan

- Mark Takaki

- Rafael Tuburan

- Jim Finck

- Daniel Finnerty

- Marc Wiskoff

- Steve Homles

- David A. Stein

- **Green Building**

- Mark Beatty, AIA, LEED AP

- Tricia Ward Waldman, CCIM

- Joe Snider, AIA, LEED AP

- Maureen Kussler, LEED AP

- Vince Mercandetti

- Kyle M. Abney CGC, LEED AP+Homes

- John Banting, LEED AP

- **Environment**

- Jayne King, chair, member of Sierra Club Executive Committee

Cynthia Plockelman, Environmental Advocate, member of Audubon Society, Native Plant Society

Mary Jo Aagerstoun, Founder/ Director South Florida Environmental Art Project

Drew Martin, Conservation Chair, Loxahatchee Group, Sierra Club

- **Education**

Jayne King, chair, Community Educator

Lorraine Marks, Business Entrepreneur

Mary Jo Aagerston, Founder/ Director of South Florida Environmental Art Project

Christina M. Crespo, LEED AP, Recycling & Sustainability Coordinator, School District of Palm Beach County

Sandi Barrett, Palm Beach Community College

Jaene Miranda, Palms West Chamber of Commerce Executive Director

Andrew Luchey, Staffing Agency Director

The final recommendations were determined by each subcommittee bringing forward its top 3 recommendations, and this report has been organized accordingly.

Please note that numerous members of the Green Task Force and its subcommittees have offered continued assistance to the County in further development of the various ideas presented in this report.

[Click Here](#) for Minutes for all Task Force meetings. (Note that if this link is no longer working, minutes are available at [www.pbcountyclerk.com](http://www.pbcountyclerk.com) by navigating to the “my minutes” section).

The final version of this report and appendices will be made available [www.pbcgov.com](http://www.pbcgov.com) and at all County libraries.



## CHAPTER 2: ECONOMIC, ENVIRONMENTAL, AND POLITICAL CONTEXT

There are three main reasons for Palm Beach County to pursue a greener direction: economic reasons, environmental reasons and political reasons. Each of these is explored briefly below:

### ECONOMIC CONTEXT

There is a deep-rooted perception in many individuals and organizations that environmental programs always result in higher costs. But this perception ignores three fundamental truths about going green:

1. By definition, environmental programs make communities less wasteful, more efficient, and healthier. Cities and counties across the State of Florida and in every part of the United States have repeatedly found this can be less expensive than becoming more wasteful, less efficient and less healthy.
2. Inefficient habits cost money: Many organizational practices result from habit and the belief that “this is how we do things here”. Yet exploring these habits can reveal surprising cost savings. Two simple examples are purchasing more fuel-efficient vehicles, or switching to energy efficient technology. These simple changes can save millions of dollars in operating costs for cities or counties, large and small.
3. There is a green cost continuum: Some green actions may cost more, but others may be less costly immediately (such as purchase of remanufactured printer cartridges), or may require upfront investments with lower operating costs over time (such as retrofitting lights to more energy efficient versions), or be more expensive upfront but result in lower repurchase costs (such as buying durable goods instead of disposable)

Cities across the nation have found that well structured green programs have helped save millions of dollars, particularly in the area of energy efficiency and greenhouse gas reduction.

Examples include:

- In 2007, the first year of its energy management program, Fayetteville, Ark., saved \$300,000 in energy costs due to emphasis on energy conservation. One of its initiatives was the installation of thermostats that cost about \$100 and paid for themselves in one month.
- The City of Ann Arbor, Mich., received a \$630,000 grant from the Ann Arbor Downtown Development Authority to fund LED retrofits for 1,400 downtown lights. The energy-saving installations will save the city over \$100,000 per year.

- In Nashua, N.H., officials replaced light fixtures to improve energy efficiency at Street and Traffic Buildings for an annual saving of \$42,000. In addition, lighting upgrades and motion sensors at City Hall delivered an annual savings of \$6,500. New windows and frames in City Clerk offices alone lowered annual energy costs by 30%.

Finally, it has become readily apparent that “green” is no longer a fringe sector of the economy. With growing demands for green services and products in the marketplace, everyone from Walmart to the local café are going organic and green. Communities are increasingly seeing the opportunity to attract green business and green jobs. There is great potential for Palm Beach County to explore these opportunities to promote economic development within the County. The recent Stimulus Package that promotes the development of many green jobs is just an additional piece of evidence of this growing trend.

## **ENVIRONMENTAL CONTEXT**

As Palm Beach County and South Florida grow, the environmental impact of its citizens and businesses may grow with it. However by implementing many of the green recommendations in this report, the County can meaningfully reduce its environmental impacts while improving citizen livability and reducing long term risks.

### ***Energy***

As energy costs rise, Florida continues to feel the impacts as well. The growing use of energy presents continued problems as we try to find ways to produce more energy. Utility rates for Florida residents continue to rise. The need for cleaner and more affordable fuel alternatives is apparent. In addition, there is a growing sentiment that we should reduce our dependence on foreign sources for energy.

### ***Climate Change***

Governor Crist and other Florida organizations have stated that Florida is on the front lines of environmental impacts from climate change. There is increasing evidence from scientists that hurricane activity may be linked to man-made climate impacts, and numerous organizations have released projected coast line impacts showing large portions of our state under water under the current projections for sea-rise. These areas coincide directly with our largest population centers, and present rather troubling environmental and economic scenarios. There appears to be a significant vested interest for Florida to take the lead on making sure such sea-level rise does not happen.

### ***Water***

Water shortages in Florida continue to be an ongoing problem. The South Florida Water Management District has stated that it cannot continue to guarantee water for further population growth and development. In addition, the existing water ways and the Everglades continue to have significant problems related to pollution, agricultural run-off, and other contaminants. Many areas in the state continue to struggle with polluted water being dumped into the Intracoastal waterway, the Gulf, and the ocean.

### ***Transportation***

The general sentiment is that gas prices over the long term will continue to rise, putting pressure on motorists. South Florida and Palm Beach County residents will likely feel these costs, as our regional transportation networks are heavily auto dependent. As population and traffic grow, it will be important to think about long term transportation strategies that offer alternatives to the automobile.

### ***Waste***

As Palm Beach County grows as well, there is the constant question of how to dispose of waste. This problem and expense will continue to be an issue as we move forward. Finding new places to put landfills is becoming increasingly difficult, and the ones we have are often costly to operate, as well as present environmental hazards. Long-term strategies to handle our waste stream more environmentally responsibly and economically will be critical.

## **POLITICAL CONTEXT**

In the current political context, no government body can ignore environmental issues – particularly those related to energy, climate change and green building. There is a new green political reality where green issues have risen toward the top of the agenda.

### ***Federal Government***

On November 4<sup>th</sup> 2008, President-Elect Obama stated that one of the major challenges to our future included a “planet in peril”. As such, the Obama Administration has acted quickly to bring environmental issues to the top of the political agenda. Key green elements of an Obama environmental plan that is already being circulated include:

- *Energy Efficiency.* Major increases in funding to improve the efficiency of government, commercial, and residential buildings as well as the industrial sector.
- *Renewable Energy.* Broad support for new development of both small-and large-scale projects in solar, wind, geothermal, advanced biofuels, etc.
- *Grid Modernization.* From upgrades to our transmission and distribution system to installation of smart energy meters for households and businesses.
- *Mass Transit.* Funding "ready-to-go" projects, such as the \$16 billion in projects that could break ground in 2009, according to the American Public Transportation Association. This will include a range of programs to accelerate transition to low-emissions personal and commercial vehicles including electric and plug-in hybrids.

Significant pieces of the Stimulus Package incorporate green concepts, as much as \$40 Billion by some estimates. In addition, the Federal government already mandates green certified construction for many Federal buildings, as well as numerous other green programs. Currently as well, a Climate Bill is currently being discussed in Washington, D.C. that could initiate a “cap and trade” program to limit green house gas emissions and spur economic development of more efficient technologies.

It is critical for any local government to be in tune with the rapidly changing international and national political landscape surrounding green policies.

### **State of Florida**

Prior to the elevation of political interest in green issues at the national level with Obama's election, in 2007 Governor Charlie Crist signed three climate change related Executive Orders in Florida. ([Click Here](#))

- Executive Order 07-126 set greenhouse gas reduction targets for state agencies and departments and adopted the U.S. Green Building Council's LEED standards for all new state government facilities and all existing buildings owned by the Department of Management Services.
- Executive Order 07-126 required state-owned vehicles to be more fuel efficient and to use ethanol and biodiesel fuels when available.
- Executive Order 07-127 requests that the Florida Public Service Commission initiate rulemaking to 1) require that utilities produce at least 20 percent of their electricity from renewable sources and 2) authorize statewide net metering.
- Executive Order 07-128 creates the Florida Governor's Action Team on Energy and Climate Change to develop an Energy and Climate Change Action Plan to recommend ways to meet the new greenhouse gas reduction targets.

In addition, the Florida legislature has been very active, passing HB 7135, a comprehensive energy bill that mandates green construction for Florida public buildings, as well as a host of other measures. Another example is HB 697 that is pushing for sweeping changes to make local Comprehensive Plans more sustainable.

There is every indication that the current green mood in Tallahassee will continue. Many local jurisdictions are seeking to begin implementing policies and programs now, as there is a feeling that sooner rather than later, such changes may be mandated from the Governor and from the Legislature.

### **Local Government**

Throughout the State, Counties have been pursuing green initiatives. Some examples include Sarasota County, Alachua County, and St. Lucie County. Each of these counties is coordinating to reduce the environmental impacts of County operations, reduce operating costs, and promote sustainable economic development. Miami-Dade County has established a committee to determine how to respond to the growing threat of Climate Change. There is a growing consensus among Florida Counties that the County is a critical link in how local communities and the State of Florida will go address regional environmental concerns and embrace regional opportunities for sustainable economic growth.

At the City Level, by end November 2008 over 900 U.S. mayors had signed the U.S. Mayors Climate Protection Agreement, and as such had publicly agreed to "reduce global warming pollution by taking

actions in the City's own operations and communities". ([Click Here](#)) Numerous jurisdictions in Palm Beach County have signed on to this agreement (e.g. West Palm Beach, Boca Raton, Delray Beach). Within Palm Beach, numerous cities have established green task forces and are aggressively pursuing green reviews of their own operations and development regulations. Boynton Beach and Delray Beach have established local citizen green advisory boards. Many of these communities are beginning to partner with one another as they come to the conclusion that there is more opportunity through partnership in our densely populated County. The County government has an important role to play in coordinating these local efforts.



## CHAPTER 3: EXISTING COUNTY GREEN INITIATIVES

As the Green Task Force began its work, it quickly became apparent that in order to define where the County could go to be green, we had to define what the County was already doing that was green. An extensive audit of County activities showed that the County had already implemented a number of green policies, and some departments were actually proving to be quite successful in achieving green government practices. The following is by no means a complete list of every current County green practice, but represents a quick baseline of where the County is today.

Of note as well is that the Task Force realized there were a lot of efforts throughout the County, however, these efforts were not coordinated in an organized manner. This led to concern on the part of the Task Force that efforts were being duplicated as different parts of the organization explored similar topics and policies.

### **FLORIDA GREEN BUILDING COALITION INTERNAL AUDIT / PALM BEACH COUNTY INVENTORY OF ENVIRONMENTAL SUSTAINABILITY INITIATIVES**

As the Task Force began trying to determine what practices were already in place, County staff began an extensive audit throughout the County. The County began using the Florida Green Building Coalition Green Local Government checklist, distributing it to departments. The responses to the checklist and a resulting summary report provide a comprehensive review of County Green practices in the Palm Beach County Inventory of Environmental Sustainability Initiatives. [Click Here](#) to view this report in its entirety.

In addition to this report, numerous County Staff gave presentations to the Task Force on their department's green initiatives. These included a presentation from the Fleet Manager who shared a great deal of information on the County's green fleet programs ([Click Here](#)). Facilities as well gave a comprehensive presentation ([Click Here](#)). As a result of many of these presentations, the Green Task Force found that many of these areas required less focus from the Task Force as many programs were already in place.

### **ALTERNATIVE ENERGY TASK FORCE**

In January 2007, the Palm Beach County Overall Economic Development Program Committee formed the Alternative Energy Task Force. This Task Force delivered a report of recommendations to the County in November of 2007. These recommendations included:

- Action Item # 1: Launch an initiative to make all government buildings and public spaces demonstration sites for various forms of "green technology"
- Action Item # 2: Create a website which will serve as a "clearinghouse" for green information
- Action Item # 3: Create a Palm Beach County Alternative Energy Development Council
- Action Item # 4: Launch an initiative that will support the growth in green curricula at the local Colleges, High Schools, and Middle Schools

[\(Click Here](#) to view this report in its entirety).

### **OFFICE OF ECONOMIC DEVELOPMENT SUSTAINABILITY PLAN**

In March of 2007, the Palm Beach County Office of Economic Development delivered its *Palm Beach County Strategic Economic Development Plan* to the Board of County Commissioners. This report contains only 5 different areas of Strategic Directions, one of which is an entire section on Sustainability. There are extensive detailed recommended actions in this report. The Green Task Force was unable to determine if there was any follow up or implementation to this 75 page detailed report. ([Click Here](#) to view the report in its entirety).

### **WATER TASK FORCE**

In October 2008, the Board of County Commissioners adopted a resolution to form a Water Resources Task Force “to identify and evaluate efficient and cost-effective opportunities in the provision of future water supplies.” The County notes:

*“This volunteer group of water managers and engineers studies ways to protect our current and future water supply. One possibility they have suggested is to alter the water tables in certain areas during the dry season to maximize surface water storage capacity. The task force also recommends looking at creating a second regional reservoir out west. Right now, storm water in the C-51 Canal is being lost to tide, but several billion gallons could be diverted from the canal and stored in nearby limestone pits, then sent south as needed to replenish well fields in central and southern Palm Beach County and Broward County.”*

### **LAND DEVELOPMENT REGULATION ADVISORY BOARD**

The Land Development Regulation Advisory Board appears to be exploring green issues through its Sub-Committee Structure including sub-committees such as:

- Pervious Task Force Subcommittee
- Renewable Energy Subcommittee

[\(Click Here](#) for more information)

### **PALM BEACH COUNTY SCHOOLS**

The School District of Palm Beach County has just completed the second year of its "Green Schools Initiative" which began in 2007. This District-wide program encourages and aides schools in increasing their recycling rates, decreasing their waste generation, energy and water consumption, adjusting their purchasing to include more environmentally-preferable choices, protecting and enhancing indoor air quality, and overall, enhancing the schools' environmental performance. At the beginning of 2007, the District created a new, permanent "recycling and sustainability coordinator" position. This person reports to the District's Utility Manager in the office of Environmental Controls. Some of the job responsibilities are to act as a liaison to the schools on topics including waste reduction, recycling, and energy and water conservation, develop new "green" policies, chair a multi-department "green team", act as an internal

advisor on all LEED projects, and provide education and outreach to District staff, parents, and students using a dedicated website and field visits.

A few highlights of the *Green Schools Initiative* in the 2008-2009 school year:

- Constructed the first and only LEED Gold certified school in the state of Florida (Pine Jog Elementary)
- Registered 5 new LEED projects
- Have more than 40 LEED Accredited Professionals on staff
- Passed mandatory indoor air quality, recycling, and energy & water conservation policies
- Partnered with the Community Foundation for Palm Beach and Martin Counties and the Pine Jog Environmental Education Center on the Green Schools Recognition Award program
- Launched a dedicated green schools website ([Click Here](#))
- Doubled recycling rates in schools and administrative offices
- Began a "farm-to-table" program to bring more locally-grown produce to school cafeterias
- Reduced energy consumption District-wide by over 10 percent
- Purchased a number of hybrid and smaller-sized vehicles to replace large diesel trucks



## **SECTION B:**

# **RECOMMENDATIONS BY SUBCOMMITTEE**



# CHAPTER 4: GOVERNMENT SUBCOMMITTEE RECOMMENDATIONS

The Government Subcommittee sought to review general County operations for green implementation opportunities. The Subcommittee spoke with and received presentations from numerous department heads on their efforts. The general focus of the subcommittee was to review internal operations of the County.

## RECOMMENDATIONS

### **Recommendation 1: Establish and Incorporate a Sustainability Administrative Infrastructure into County Administrative Operations**

#### Context

- Successful green governments consistently establish a structure of staff and / or citizen boards that work to set the government-wide goals and then create policies to translate those goals into action.
- The County currently has no specific person, department, or board to oversee sustainability programs.
- There is little to no communication or coordination within the County on these issues. A great deal of greening is being done, but there is little communication between departments, or even knowledge of activities and initiatives.
- A huge amount of energy and time has been expended exploring green County initiatives, but that work is consistently being duplicated because there is no mechanism to coordinate the efforts. The Green Task Force uncovered efforts, previous Task Force Recommendations, and Sustainability Plans that are sitting dormant because there is not mechanism for communication and coordinated implementation. The Task Force uncovered numerous different and uncoordinated efforts including overlapping work by the following:
  - This Green Task Force
  - The Office of Economic Development
  - The Water Task Force
  - The Land Development Regulation Advisory Board Renewable Energy and Pervious Task Forces
  - The Alternative Energy Task Force

- In short, there is grave concern that the County keeps duplicating efforts and re-inventing the wheel.

### **Intent**

To establish a system for coordinating and then implementing green County efforts.

### **Implementation**

It is understandable that these separations occur within government, however, it appears that after many years of uncoordinated efforts, it is time to establish a system for managing Countywide green goals and implementation efforts.

The Task Force is recommending a three-fold structure to this structure:

- Create a Sustainability Coordinator Position
- Establish and appoint a permanent Green Advisory Board
- Establish an internal Staff Green Team

Detailed suggestions on the make up of these positions are as follows:

#### *Sustainability Coordinator*

The role of this position is to coordinate and manage county-wide sustainability initiatives with the goal to improve efficiency and promote sustainability.

The Sustainability Coordinator would:

- Work in conjunction with *all* county departments to assist in identifying inefficiencies and propose cost effective sustainable improvements.
- Be placed at a high enough level so that there is authority to coordinate with multiple departments.
- Coordinate with finance to track improvements to quantify cost savings.

**Funding** is likely available through:

- Savings (numerous governments have shown these positions to pay for themselves, often many times over)
- Energy Conservation Block Grant in the Federal Stimulus Package.

Suggested **Key Roles** of Sustainability Coordinator would be:

- Serving as a central point of contact for the County
- Coordinate and manage county-wide sustainability initiatives
- Serving as a liaison to a Green Advisory Board
- Coordinating internal staff efforts and communications between departments (meetings, activities, etc.)
- Guide and assist in County sustainable initiatives
  - Intergovernmental coordination of sustainability efforts
  - Creating a central library for green initiatives (e.g. Alternative Energy Task Force Report, this report, Office of Economic Development Sustainability Plan, Fleet Management Reports, Facilities reports etc.)
  - Annual green county evaluation report
  - Aid BCC in understanding sustainable initiatives
  - Identify associated paybacks and potential costs
- Develop Sustainable Policies and Practices
  - Green Purchasing Policy
  - Green Fleet Policy
  - Green Building Policy
  - Coordinate a Climate Action Plan
- Pursue Grants and Funding Opportunities
  - National and State funding
  - Private funding Work with the Finance Department to establish cost tracking and subsequent cost savings from green policies.
- Provide General Oversight
  - Departmental efficiency evaluation
  - Recycling
  - Monitor adopted policy to ensure implementation
- Promote Education and Awareness
  - Engage citizens to promote and educate sustainable initiatives
  - Develop sustainable programs with communities to promote sustainability
- Quantify Success
  - Annual green report quantifying cost savings of sustainable initiatives include additional costs

Please find referenced a sample job description and qualifications list for such a position as drafted by the City of Oldsmar, FL. ([Click Here](#))

### **Best Practices Implemented in Other Jurisdictions**

- Alachua County is a leader in the state for sustainable initiatives. The counties “Sustainability Program Manager” similar to the position described above has been an essential ingredient to their success. The county has drastically reduced their carbon footprint through establishing a baseline and applying sustainable concepts to Alachua County’s internal practices. Alachua County was the first county in the country to create a feed-in tariff to promote the use of renewable energy sources. [Click Here](#) to see the attached description of the Sustainability Program Manager’s job duties and essential activities.
- The City of Miami has multiple paid positions in a comprehensive Office of Sustainable Initiatives. [Click Here](#)
- The City of West Palm Beach has recently established an Office of Sustainability with a Director position.
- Chatham County, NC has created and staffed a Sustainable Communities Development Director position. [Click Here](#)
- Many other jurisdictions nationwide such as:
  - Chicago, IL
  - Portland, OR
  - Pittsburgh, PA

### Green Advisory Board

Create a “GREEN ADVISORY BOARD for Environmental Sustainability and Conservation”. **(GABESC)**

Purpose of the Board:

- To identify actions and policies that can be implemented by the Palm Beach County Board of County Commissioners (BCC) to encourage healthier, more resource efficient living for County residents and visitors and within the operation of Palm Beach County Government through more sustainable buildings, energy and natural resource conservation and other environmental sustainability concepts.

It is proposed that the GABESC meet bimonthly to review the policies and activities of the county as established by the BCC and as represented by the County Environmental Sustainability Coordinator and support Green Team members.

It is proposed that the Board:

- Encourage green building concepts
- Develop energy and resource conservation for county buildings and operations
- Review potential policy and code revisions for incorporation of green concepts
- Explore grant funding for county environmental sustainability coordination
- Promote intergovernmental support and coordination
- Evaluate concepts for feasibility, ease of implementation and economic benefit
- Track implemented initiatives for effectiveness and cost savings

Tasks for this Board might include:

- Review the Green Task Force (GTF) Final Report and all other green reports created by prior Green Task Forces. Explore the logistic and economic feasibility of all of these proposals, ranking and prioritizing recommendations.
- Recommend additional sound green concepts with environmental benefits
- Review Palm Beach County Environmental Sustainability Initiative Report and provide recommendations to the Internal Green Team
- Review reports from the County Sustainability Coordinator that track the savings to the county
- Deliver Reports:
  - 6 month-Interim Report: *due after 1st GABESC meeting* – to include 1) summary of activities 2) preliminary evaluation and prioritization of the recommendations identified in the Green Task Force Final Report 3) preliminary tracking reports
  - First Annual Report: *due 1 year after 6-month Interim Report*– Annual report to include 1) summary of activities 2) Evaluation and Prioritization of the Green Task Force Final Report 3) financial tracking reports of implemented initiatives.
  - Annual Report: *due annually thereafter* – include at a minimum 1) summary of activities 2) summary of Green Initiatives 3) financial tracking reports 3) recommendations for future initiatives.

It is recommended that the GABESC be composed of seven (7) members appointed by the Board of County Commissioners and has the powers and duties to adopt rules of procedures.

The proposed make up of the Board is as follows:

- Municipal representative from the League of Cities
- Member of an Environmental Group with a professional degree and background in environmental sustainability
- Registered / licensed architect, registered in the State of Florida and LEED Accredited
- Professional engineer, registered in the State of Florida and LEED Accredited
- Commercial / residential builder / developer with LEED accreditation and / or experience building or developing a LEED project
- Citizen-at-large with a college degree and experience in business administration
- Citizen-at-large with a college degree and experience in natural resource conservation

#### **Best Practices Implemented in Other Jurisdictions**

Numerous jurisdictions have established similar type boards or citizen groups to work with government staff, including:

- City of Boynton Beach, FL ([Click Here](#) for more information)
- City of Delray Beach, FL
- City of Hollywood, FL ([Click Here](#) for more information)

#### **Internal Staff Green Team**

Create a Palm Beach County Sustainability Team to Assist the County Sustainability Coordinator in Efforts towards environmental sustainability for Palm Beach County Government, the regulated community, and the general public.

It is recommended that County departments:

- Support as needed (with an expectation to not exceed an average of 4-8 hrs per month) to further the goals and objectives of the County's Sustainability Coordinator. Voluntary participation within the department is encouraged.
- Work in cooperation with the Sustainability Coordinator to implement initiatives and track for cost savings and environmental sustainability.

- Increase awareness and general morale related to green initiatives implemented by the county.
- Look for green initiative opportunities within own department and coordinate laterally, up, and down.

As the Office of Economic Development is administering the Stimulus monies for the Energy Conservation Block Grant, it seemed appropriate to recommend that they coordinate and establish the green team.

### **Best Practices Implemented in Other Jurisdictions**

- The City of Boynton Beach, FL has been very successful in coordinating the efforts of its staff through such an internal green team. The program is continuing to gain momentum as staff become more excited and educated about green initiatives and their daily operations.
- The City of Sarasota has an internal Environmental Management Task Force made up of city staff. ([Click Here](#))
- City of Lake Worth

### **Recommendation 2: Create a Centralized Financial Tracking System to Quantify and Qualify the Savings Attributed to County Sustainability Efforts**

#### **Context**

- The County budget is critical to any County program or initiative.
- Green programs have repeatedly proven themselves to be cost effective, generating significant savings.
- The success of green programs is contingent upon proof that the measures being taken are truly cost-effective.
- For a sustainability officer/department to be effective, they must first be affordable, cost-effective, and most importantly eventually generate savings in the institution in which they serve.
- There does not appear to be any current tracking mechanism within the County to track cost savings from specific programs. Some departments have attempted to do this in certain cases, but there is not a big picture snapshot of what green programs are truly accomplishing from a budgetary perspective.

- The current practice of individualized department budgeting can often be a hurdle to understanding long-term cost implications of County-wide green programs.

### **Intent**

To create a process for tracking the costs and returns of green programs implemented by the County.

### **Implementation**

Typically, each department and/or institutional subdivision would perform their own budgetary analysis and claim cost saving measures as their own. While this is usually a positive and expected practice, it is recommended that savings from implementation of the broad green measures be kept centralized under the sustainability officer and the Countywide finance personnel. The Green Task Force had concerns about the current departmental budgetary process, which appears to be very compartmentalized. Often green practices from one budget area, can promote savings in another area. (For example, modest construction costs could reduce long-term operations costs for a building, but be coming from two separate budgets).

Specifically, it is recommended that the county budget and finance office establish a separate accounting 'department' for the sustainability officer/department, whereby itemized direct expenses and savings from implemented measures can be clearly depicted. The head of said 'department' could be the sustainability officer and all budgetary reporting would go through them. It is also incumbent upon the budget and finance office to seek any departmental budgeted savings attributed to energy, water, and other conservation efforts that are incorrectly allocated to the departments and appropriately allocate them to the sustainability officer/department.

The long-term goal would be to earmark savings into an "account," from which future sustainability (and further cost-saving) measures could be paid for. For example, the savings from some simple no / low-cost items today, could then be used in the future to pay for higher capital cost items that also have longer term cost savings.

### **Best Practices Implemented in Other Jurisdictions**

- Boulder, CO has implemented such a reporting and tracking system. ([Click Here](#))
- Many businesses have begun tracking the success of these measures in their bottom lines. GreenBiz.com notes these practices in *Tracing and Tracking a Sustainability Footprint*. ([Click Here](#) for this article)
- A Climate Group report (*Carbon Down, Profits Up*) shows Portland having saved more money through carbon reduction than any other major City it studied: over \$300 million saved by the city and its residents through its carbon reduction efforts. ([Click Here](#) for this report).

### **Recommendation 3: Establish Comprehensive Countywide Energy Conservation and Green House Gas Emission Reduction Strategy (ECS) to Reduce Both Energy Consumption and Green House Gas Emissions (GHGE).**

## Context

- The Task Force quickly realized that there is no Countywide energy conservation strategy or plan.
- Different departments are working sporadically within their own areas, with no measurable or quantifiable goal, and no ability to measure or quantify results from their efforts.
- On June 25, 2008, Governor Crist signed into legislation, House Bill 7135. This legislation mandates that all county, municipal, school district, water management district, state university, community college, and Florida state court buildings be constructed to meet the United States Green Building Council (USGBC), Leadership in Energy and Environmental Design (LEED) rating system, the Green Building Initiative's Green Globes rating system, the Florida Green Building Coalition standards, or a nationally recognized, high-performance green building rating system as approved by the Department of Management Services. These new regulations apply to all buildings for which architectural plans were commenced after July 1, 2008. ([Click Here](#) to access the bill)
- In addition, Governor Crist signed HB 697 on June 17, 2008, which heavily impacts Florida's Building Code and adopts the International Energy Conservation Code (IECC) as additional regulating statutes. And the Governor's Climate Action Plan, Executive Order # 07-128, effective July 13, 2007, mandates reduction of statewide Greenhouse Gas Emissions (GHGE) by the year 2017 to the year 2000 levels. ([Click Here](#) to access the HB 697 and [Click Here](#) to access the Governor's Executive Order)
- The State has instituted extensive Comprehensive Plan Changes. The following changes were enacted by the Governor effective with the signing of HB 697, and the Comprehensive Plan was expanded to include:
  - Future Land Use Element - 163.3177(6)(a) –
    - The discouragement of urban sprawl
    - Energy-efficient land use patterns accountable for existing and future electric power generation and transmission systems;
    - Greenhouse gas reduction strategies.
  - Traffic Circulation and Transportation Elements
    - 163.3177(6)(b) – The traffic circulation element shall incorporate transportation strategies to address reduction in greenhouse gas emissions from the transportation sector.
    - 163.3177(6)(j) The incorporation of transportation strategies to address reduction in greenhouse gas emissions from the transportation sector.
  - Conservation Element – 163.3177(6)(d)
    - Including factors that affect energy conservation

- The land use map or map series shall generally identify and depict the following: energy conservation.
- Housing Element – 163.3177 (h)
  - Energy efficiency in the design and construction

### **Intent**

To create a systematic plan identifying funding opportunities, establishing programs to facilitate and measure efficiencies established by setting benchmark levels for energy and GHGE reductions.

### **Implementation**

The Governmental Sub-Committee of the Green Task Force is recommending that the County Commission undertake a GHGE study to establish a benchmark year from which measurable reporting of GHGE reductions will be made to meet the Governor's directives.

While the above are unfunded mandates from the State, there is a funding opportunity through the Energy Efficiency and Conservation Block Grant (EECBG) for the County to offset the cost of both the Energy Conservation Strategy (ECS) and GHGE benchmark with Federal Stimulus funds. By just submitting an application for the County's allocation of \$6,587,600, the County is immediately eligible for \$250,000 to complete the ECS. In addition to the EECBG funding, there are numerous more opportunities within the American Recovery and Reinvestment Act that the County should be actively pursuing. Senator Ron Klein's office has compiled a very comprehensive list of Stimulus funding opportunities, with specific emphasis on those most applicable to Florida. ([Click Here](#))

With the current availability of Federal funds, the County is well poised to take advantage of this unique opportunity to fund this recommendation with Stimulus money. There will be staff time required to assist with compilation of data, tracking, reporting and measurables, but again, administration costs are allowable within several of the Stimulus programs.

### **Best Practices Implemented in Other Jurisdictions**

- The City of Miami has adopted a Climate Action Plan similar to HB 697 and established a goal to reduce greenhouse gas emissions by 25% by the year 2020 ([Click Here](#) for the Plan). The Plan addresses five initiatives in four primary sectors that can be applied to Palm Beach County:
  - I. Buildings
    - a. Increase energy efficiency in buildings
  - II. Energy
    - a. Reduce greenhouse gas emissions from energy generation
  - III. Transportation

- a. Reduce emissions from transportation

IV. Land Use

- a. Adopt land use strategies which encourage Smart Growth
- b. Begin process of planning for climate change impacts (e.g. rise in sea level)

- The City of Chicago has also adopted a climate action plan that is available online. ([Click Here](#))

#### **ADDITIONAL TOPICS AND IDEAS FROM THE GOVERNMENT SUBCOMMITTEE**

- Stimulus funding and how the County might be able to benefit from green stimulus funding for local governments.
- Coordination with other governments: The subcommittee discussed at length the importance of the County's role in coordinating green efforts with local municipalities, the State, and the Federal Government.
- The importance of moving forward with a climate footprint for the County to quantify current green house gas emissions, and then establish a comprehensive plan for reducing these.
- Establishing an inventory of green initiatives by the County. This was completed during the tenure of the Task Force and is available in Chapter 3 of this report.



# CHAPTER 5: ENERGY SUBCOMMITTEE RECOMMENDATIONS

The Energy Sub-Committee's proposed actions prioritize energy usage reduction measures, considering the present economic downturn and achievability on a county level.

Short Term Energy Conservation proposed actions are easily implemented within next 3 – 6 months.

Long Term Energy Conservation are proposed actions – noting their implementation should be considered over the next 12 – 18 months (pending stabilization of financial uncertainty).

In developing our programs, the Energy Subcommittee embraced the following criteria: Short-Term with No/Low Cost and Long Term with Capital Cost requirements. Our programs reflected reducing energy consumption and concomitant reliance of fossil fuel powered plants. Wherever possible our programs would create jobs within Palm Beach County.

## RECOMMENDATIONS

### Recommendation 1: Advocate for a Solar Rebate Program for Solar Hot Water Heaters

#### Context

- Most experts assert that hot water usage is the second largest user of energy after air-conditioning. ([Click Here](#))
- Solar hot water systems can provide significant amounts of energy.
- Incentive based programs help to develop the local solar economy and create jobs.
- The Federal Government and the State of Florida currently have solar incentive programs.
- Florida, with its sunshine, is a great location for solar implementation.

#### Intent

To provide additional incentive for consumers to purchase solar hot water-heating systems.

#### Implementation

Support FPL's reinvestment in green energy within PBC by offering a rebate of \$750 for installation of solar hot water. This could be a lump sum or spread out as a bill credit over six months for the installation of a solar hot water system.

The ESC requests PBC Commissioners to prevail upon FPL to grant a rebate for Solar-Powered Hot Water Heaters. FPL will establish a rebate via an electric credit of \$750 over six months, for the installation of a solar hot water system installed by a licensed master plumber or a licensed Solar

company. As a benefit for FPL the homeowner will give back the carbon credits from such a system for five years. Basically both the homeowner and FPL gain from this rebate program.

This is an easy rebate program to implement by FPL & PBC. Since FPL does not have a solar rebate program it will take a concerted effort by Palm Beach County via the Board of County Commissioners to start a dialog for such a rebate program. Since the termination of The Sunshine Energy program, FPL has not followed through with the promises of solar rebates.

FPL solar energy hot-water heater rebate would create lots of jobs in the county and many happy homeowners. The Commissioner could have ribbon cutting in every district for the first solar system adopters and get great positive press coverage. This is a win-win proposal for PBC – FPL and the homeowners of Palm Beach County.

### **Best Practices in Other Communities**

A Solar Utility Rebate program has been adopted by the following:

- City of Ocala Electric Utility
- City of Tallahassee Utilities
- Clay Electric Cooperative, Inc,
- Gainesville Regional Utilities
- Gulf Power
- Orlando Utilities Commission
- Jacksonville Electric Authority
- Kissimmee Utility Authority
- New Smyrna Beach
- Progressive Energy
- Tampa Electric

## **Recommendation 2: Establish a Horse Manure Anaerobic Digestion Facility in the County**

### **Context**

- There is a large equestrian community in Palm Beach
- This community pays to have its manure removed and disposed of.
- Horse manure has been captured and used as an energy source in other areas.

### **Intent**

To create an economically advantageous program that captures local waste and converts it to energy for the County.

### **Implementation**

This project entails Anaerobic Digestion [AD] of Horse Manure at Capital Cost of \$11 Million Dollars. A tipping fee of \$38/ton would achieve self-financing, yield a viable Return on Investment, create about 30 skilled jobs and provide energy for about 2600 homes.

### *Analysis*

- The equestrian community of Palm Beach County reflects peak program activities from December to March. During this four-month period, approximately 320 Tons per Day [TPD] of horse manure is generated.
- Energy Generation and Capital Cost: The 320 TPD, when processed via AD, could generate 4.6 Megawatts [MW] of energy at Capital Cost of \$11 million.
- Economics: This Preliminary Evaluation determined Annual Costs including: Operating Cost and Debt Service. These costs were offset by revenue from sales of excess energy.
- Annual Cost:
  - Operating Costs, estimated at 7% of Capital Cost, = \$259,000/year
  - Debt Service, based on 10% interest rate and ten year pay-back = \$ 1.38 million/year
- Annual Revenue Saleable Energy: Approximately 30% of the total energy generated by AD is used to power the facility. The remaining 70% could yield an annual revenue [based on \$72.50 per MW-Hr] = \$672,000/year.
- Tipping Fee and Return on Investment: A Tipping Fee was determined based upon the Net Annual Costs with a Return on Investment [ROI] of 15% within five years. Tipping Fee = \$38 per ton
- Compare \$38/T tipping fee to present horse manure disposal cost.
- Consider establishing PBC mandate for horse manure waste flow control i.e. similar to C&D material.

### **Best Practices in Other Communities**

- Florida Greensteam Equine Energy -- a limited liability corporation that the Florida Thoroughbred Breeders' and Owners' Association (FTBOA) formed with international firm Global Green Solutions -- has applied for \$7 million, the maximum amount Farm to Fuel allows for a commercial project. The money would go toward the projected \$25.3 million cost to build a plant in Marion, where an estimated 100,000 tons a year of horse muck -- a mix of manure, wood shavings and straw bedding -- as well as assorted wood waste would be burned.

The application submitted to the state says Florida Greensteam Equine Energy has negotiated potential purchase contracts with Progress Energy, Seminole Electric Cooperative and the Florida Municipal Power Agency, which is a partnership of municipal-owned utilities that includes Ocala Electric Utility.

- Onsite Power Systems of Fresno, CA is coordinating the construction of the small-scale pilot plant at UC Davis. In addition, On-Site Power was preparing to break ground in October on an APS-Digester system containing ten 350,000-gallon system tanks at the Palm Beach Thoroughbred Training Facility in Florida, to handle stable waste and wash-down water from 1,900 horses. The “feedstock” from the horse stables is about 20% manure and 80% straw, combined with the wash-down water. The manure-to-energy plant will generate about 2 megawatts of power — enough to meet the racetrack’s needs and to sell surplus energy to local utilities. (This project’s status should be determined and, if delayed, assess reasons.)
- Sigarca Inc., seeks a \$499,500 Farm to Fuel grant for a demonstration project at the North Central Florida Agriculture and Civic Center, formerly the Southeastern Livestock Pavilion. Sigarca Inc. promotes and markets a process developed at the University of Florida. Horse manure is loaded into tanks or "bioreactors" that are 12 feet long and 6 feet wide. Inside the tank, bacteria breaks the muck down into a methane-based gas fuel (suitable for energy utilization), a rich soil additive and a liquid spray dubbed "soil tonic," which is similar to compost tea. (This project’s status should be determined and, if delayed, assess reasons. )

## **ADDITIONAL TOPICS AND IDEAS FROM THE ENERGY SUBCOMMITTEE**

### ***Energy Conservation & Reduction – Short Term***

Our initial efforts included no cost energy conservation, recommending the following for existing PBC buildings:

- Set thermostats to 74 deg F;
- Set hot water heaters to 120 deg F.
- Change all light bulbs to Compact Fluorescent [CF] Units . Change all Exit Lights to LED. Change all Fluorescent Ceiling Fixtures to T-8 Electronic Ballasts
- Consider Timers and/or motion detectors to eliminate parasitic energy waste. Example: Motion Detectors and Timers would turn off lights when room unoccupied for more than ten minutes.
- Consider retrofit timers on hot water heaters, saunas, whirlpool etc.; shutting off units from 11 PM to 6 AM.
- Select pilot building(s) (government and/or school) for energy survey

Upon presentation of our initial recommendations during a GTF meeting, a dialogue developed between PBC staff and ESC surfacing that many of our Short-Term recommendations had already been implemented. This realization yielded a presentation by Jimmy Beno [Deputy Director Facilities Operations] showing how thermostat temperatures were set at 74 deg F and how CFL and timers were

retrofitted in many PBC buildings. This learning experience focused our attention on the Short-Term No-Cost FPL Rebate – Solar Hot Water Heaters.

### ***Energy Conservation & Reduction – Long Term***

Long Range Actions should consider present economic condition; delay of 12 – 18 months for recommended actions until financial situation stabilizes. Given this implementation hiatus, a complete analysis is deferred; instead Recommended Actions are attributed to each proposal – justifying their future consideration.

- Study of Methane gas applications - evaluate relevant issues from our landfills and landfill redevelopment. Survey and Inventory abandoned sanitary landfills in PBC to determine if Methane gas is vented and/or utilized. Example: Municipal golf course, on Lantana [between Lyons Rd and SR 7/441], was constructed on top of abandoned landfill. If Methane gases are not being vented, self-combustion is possible – posing PBC liability
- Reuse of Wastewater Treatment Bio-Solids – typically bio-solids generated from wastewater treatment plant are dewatered to about 30%; further thermal drying achieves 90% solids [suitable for transport]. This material's heat content encourages its use as a fuel while its nutrient content encourages its use as a soil-amendment. The USEPA has designated such material of "Exceptional Quality" suitable for use as fertilizer or fuel.

### ***Investigations***

#### **PBC Solid Waste Authority [Landfill Gas] and Water Utilities Dept. [Bio-Solids]**

Marc Bruner [Chief Administrative Officer Planning & Environmental Programs – SWA] explained that only viable source of Methane from landfill gas [LFG] emanated from their Jog Rd. facility. Field measurements revealed that SWA's other abandoned landfills yielding minimal LFG – posing no risk but, also, no viable source of usable Methane.

The LFG from Jog Rd. facility powers the 600 ton/day New England Fertilization Bio-Solids [sewage sludge] pelletization plant. This facility processes all available sewage sludge bio-solids from plants managed by PBC. This facility generates a fertilizer additive suitable for agricultural and landscaping applications. The ESC, once again, learned that PBC was already implementing LFG for energy conversion and generated processed bio-solids as fertilizer additive.

#### **PBC Water Utilities Dept. [PBCWUD] – Bio-Solids Energy Conversion**

Brian Shields [Deputy Director PBCWUD] confirmed that all available domestic sludge [bio-solids] from PBCWUD wastewater treatment plants were processed at Pelletization Plant. The remaining source of potential bio-solids was the energy conversion of horse manure. Flow control of this material – deemed an agricultural waste – required regulatory control beyond scope of PBCWUD.



## CHAPTER 6: GREEN BUILDING SUBCOMMITTEE RECOMMENDATIONS

The Green Building Subcommittee focused on issues related to design, construction, and operation of both public and private sector buildings within Palm Beach County.

Of note, the Subcommittee examined closely House Bill 7135 that mandated that “all county, municipal, school district, water management district, state university, community college, and Florida state court buildings shall be constructed to meet the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) rating system, the Green Building Initiative’s Green Globes rating system, the Florida Green Building Coalition standards, or a nationally recognized, high-performance green building rating system as approved by the Department of Management Services. This section shall apply to all county, municipal, school district, water management district, state university, community college, and Florida state court buildings the architectural plans of which are commenced after July 1, 2008.”

### RECOMMENDATIONS

#### Recommendation 1: Mandate Recycling of Construction Waste

##### Context

- Construction & Demolition (C&D) Debris accounts for approximately 35% of solid waste stream in Florida ([Click Here](#) for reference)
- Up to 75% of primary construction materials are readily recyclable ([Click Here](#) for reference)
- Contributes to compliance with State legislation to build according to nationally recognized green building standard
- Contributes to compliance with State legislated recycling rates
- Cost of recycling often less than cost of disposal
- Potential revenue source for County

##### Intent

This recommendation is intended to:

- Encourage recycling and reuse of construction waste materials
- Increase diversion of debris from landfill and incineration

- Reduce impact on landfill
- Reduce pollution potential
- Conserve natural resources
- Stimulate local economy
- Generate revenue via licensing and penalty fees
- Incentive to contractors/developers via cost savings and revenue potential

### **Implementation**

The Green Building Subcommittee researched other similar programs extensively and has drafted a proposed ordinance for the County. The Subcommittee drafted this ordinance with the intent to promote recycling efforts which would also help promote the local economy. The Subcommittee wrote the guidelines with the focus on ease of implementation, no cost to the County, and revenue generation for the County. These are all outlined in the Draft Ordinance. [Click Here](#) to view the Draft Ordinance.

In addition, grants are available to recyclers and small counties from Florida DEP. PBC does not qualify for “small counties” grants, but grants are also available via Innovative Recycling Grants Program. ([Click Here](#) for information on grants and [Click Here](#) for further grant information)

### **Best Practices Implemented in Other Jurisdictions**

- Lee County, FL requires 50% diversion from construction projects of certain value, diversion fees are charged if project fails to meet criteria, waivers available. ([Click Here](#))
- Northbrook, IL requires 50% diversion from construction projects of certain size, increasing to 75% as of January 1, 2011, penalty fees assessed for projects failing to meet requirements, exceptions available. ([Click Here](#))
- Stockton, CA requires 50% diversion from all construction and complete building demolition projects, additional requirement for all composition roofing material (50%). ([Click Here](#))
- Sarasota County, FL encourages C&D Recycling, but does not yet have regulations. ([Click Here](#))

## **Recommendation 2: Create a Green Building Incentive Program for Private Developers**

### **Context**

- The issue of global warming is not going away, in fact, the problem is becoming worse every year. Palm Beach County as a community has done very little to reduce its carbon footprint.

- According to [Architecture2030.org](http://Architecture2030.org), the American Institute of Architects, the Department of Energy and others, buildings account for huge amounts of energy consumption, over 40% of our total energy usage. In addition, buildings consume huge amounts of other resources such as wood, metal, concrete, and water.
- Green buildings have been shown to conserve resources in numerous areas, both in their construction and long-term operations.
- Some studies have cited the cost of green buildings to run two to five percent above traditional buildings, depending upon level of certification, building type etc. In another study Davis Langdon determined in 2004, and again in 2006 that “There is no significant difference in average costs for green buildings as compared to non-green buildings”. ([Click Here](#)). Additional studies are available [Here](#) and [Here](#).

### **Intent**

To create energy efficient buildings and developments that will ultimately reduce green house gases in Palm Beach County, as well as reduce other environmental impacts from buildings.

### **Implementation**

- Create an incentive program for private developers where they can receive an increase in density and or floor area (in accordance with the Florida Building Code 2007) that would financially offset the increase cost to build a USGBC LEED silver certified building.
- Palm Beach County has been developing a green building incentive program for limited special districts. The groundwork has already been laid for this program. It could easily be extended to all zoning districts in Palm Beach County. Palm Beach County zoning gave a presentation to the building incentive sub-committee to discuss our common goals.

The major issue for implementing this program was boiled down to policing. It can take up to two years to obtain LEED certification. It was felt that code enforcement could be in charge of overseeing this program. Developers could be charged a fee for processing which would eliminate the cost to the county. Developers would recoup the cost thru their density and or floor area ratio increase. This program is a win for our community, a win for the developer and a win for the environment.

### **Best Practices Implemented in Other Jurisdictions**

- Gainesville, FL has been an early leader in green building in the State of Florida. Gainesville’s efforts have been a model for many other ordinances. They have adopted a green building ordinance that includes fast track permitting for building permits, and a 50% reduction in building permit fee. To receive these incentives, an independent third party must certify the building as a green building. The city government also provides marketing incentives including erection of building signs at the site, placing participants on city Web site

and press releases. Finally, a Green Building Award from the City of Gainesville recognizes one participant each year that demonstrates commitment to the program.

- Sarasota County, FL created a “Green Building Ordinance” which is a virtual clone of the Gainesville ordinance, with some minor adjustments. The Ordinance Provides for permit fee reductions, fast track permit processing, public relations / marketing for green projects, and a yearly “Green Award” program.
- Sarasota has long been a Florida Epicenter of Green Building, and has several LEED Gold County Buildings including a Library and a County Office Building. A Whole Foods Market has been awarded a LEED Silver rating. The Sarasota Girl Scout Headquarters, Kanaya Condominium Tower, & Kimel Lumber have all been awarded various LEED ratings. These and others are the result in part of the stimulating effect of their Green Building Ordinance. The City of Sarasota has expedited permitting based on projects utilizing the Florida Green Building Coalition checklists and programs.
- The University of Florida in Gainesville is also in the forefront of green building and requires all new buildings to be built to LEED Silver standards. With an electric bill for the campus of over \$130 million a year, there is a tremendous incentive to construct efficient and environmentally responsible buildings.
- There are other incentives that have been implemented around the country. Tax incentives have been implemented in Baltimore county, MD., Chatham County, GA., Nevada and New York. With our current economy and the reduction of property taxes thru amendment one, the sub-committee felt this type of program would not be possible at this time.
- [Click Here](#) for additional information on other green building programs: “Summary of Green Building & Recycling Programs in Selected Cities in Florida & Nationwide”. This Summary includes, in addition to those mentioned above, reviews of the following programs: Miami-Dade County, FL; Tallahassee, FL; Coconut Creek, FL; Palo Alto, CA; Pasadena, CA; San Jose / Silicon Valley, CA; Santa Monica, CA; Santa Barbara, CA; San Francisco, CA; Boulder, CO; Boulder County, CO; Seattle, WA; and Portland, OR. In addition, [Click Here](#) for access to the U.S. Green Building Council and their listing of green building programs nationwide.

### **Recommendation 3: Create an Exemption from Architectural Guidelines for Green Buildings**

#### **Context**

- Green buildings contribute to overall community environmental impacts, and have healthier indoor air quality for occupants.
- The current architectural guidelines were created prior to the green building movement. They are extremely limited in their architectural vocabulary. High performance green building

cannot meet the decorative menu that the current architectural guideline dictates in several zoning districts.

- The current process is a deterrent to development and slows the process down. In many cases architects are forced to dumb down their designs to comply with antiquated guidelines. High performance green buildings have a design vocabulary all their own. These buildings cost more to incorporate sustainable strategies into the design. Costly decorative details are replaced with energy conserving strategies such as day lighting with a higher percentage of glass, low E insulated glass, solar thermal water heater systems, photovoltaic solar systems either flat panel or parabolic shaped systems, wind generating systems and unique form shapes which react to the solar path of the sun.
- It's a sad state of affairs when we must create an exemption to construct environmentally responsible buildings. Green buildings should be the norm not the exception.

### **Intent**

To remove existing County disincentives / barriers to green design and construction.

### **Implementation**

The County might create an exemption for green USGBC LEED certified silver or better buildings.

### **Best Practices Implemented in Other Jurisdictions**

- Palm Beach County exempted itself from all of the architectural guidelines for their own projects. It is in the best interest of our environment that they extend the same exemption for green building in the private sector.

## **ADDITIONAL TOPICS AND IDEAS FROM THE GREEN BUILDING SUBCOMMITTEE**

- Provide free public relations for building professionals who complete green buildings by featuring those buildings on County website and Channel 20.
- Recognize environmentally responsible companies doing business in PBC (similar to Sarasota County Green Business Partnership – [Click Here](#))
- Investigate mandating concrete washout disposal.
- Fast – track / front of the line permitting for green projects as an incentive program.



# CHAPTER 7: ENVIRONMENT SUBCOMMITTEE RECOMMENDATIONS

The Environment Subcommittee focused on issues of environmental conservation in Palm Beach County, including existing protected lands, agricultural lands, and the importance of conservation planning strategies for economic development. The Committee focused on how to ensure that both the undeveloped land and urban areas were zoned and maintained in an environmentally responsible, sustainable, self-sufficient manner with a clear vision and process for maintaining the land for future generations and providing economic sustainability through the diversified Green Collar Economy.

## ENVIRONMENT SUBCOMMITTEE RECOMMENDATIONS

### **Recommendation 1: Commit to Long-term Support of and Funding for the Existing Conservation Lands Maintenance Program**

#### **Context**

- The County currently has a plan in place for conservation of natural, undeveloped lands and wetlands.
- This program has struggled for consistent support and funding.
- The County's undeveloped areas do not have consistent and assured protection and are in danger of being lost.

#### **Intent**

To conserve natural, undeveloped areas and wetlands.

#### **Implementation**

To take action on this recommendation, the County need only review its existing conservation planning documents and laws, and renew a commitment to adhering to these and funding this program.

#### **Best Practices Implemented in Other Jurisdictions**

There are over 20 counties in Florida that use local dedicated taxes for land conservation and maintenance (special taxing districts on property tax, funds not put into General Revenue on Annual budget—separate revenue source and line item).

### **Recommendation 2: Develop Policies to Preserve Agricultural Zoning and Encourage Urban Gardening**

#### **Context**

- Palm Beach County is one of the largest producers of agricultural products east of the Mississippi River.
- Food supply (production and transportation of food over long distances) has a significant environmental impact in a variety of areas in the U.S.
- Local food production promotes the local economy and reduces the environmental impact of the County and its residents.
- The County hired a consultant to provide study on public markets (Palm Beach County Public Market Network: A Business Plan by Aaron Zaretsky), yet it is unclear what, if anything, has been done with this study. Such a network would help to promote a green and local agriculture in the County. This report should be available from the County.

### **Intent**

To maintain and increase the amount of County land used for agriculture (both our existing agricultural infrastructure and an expansion in urban agriculture) as an important economic development opportunity and an important more sustainable alternative to reliance on importing foods.

### **Implementation**

Suggestions for implementation are as follows:

#### *Agricultural Reserve Zoning*

- Maintain current agricultural zoning (do not allow variances for reduction of current levels of agricultural zoning) for food cultivation and ensure adequate food supply is available for residents in all circumstances.
- Provide incentives for organic farming, such as highest and best use of the land designation with property appraiser to encourage expansion of organic agricultural activity and increase in the amount of land used for agricultural purposes.

#### *Urban Farming*

- Expand opportunities in public spaces for organic community gardens, fruit tree orchards, etc.
- Revise residential zoning to permit organic urban farming
- Create economic avenues and incentives for marketing local agricultural products grown in Palm Beach County urban gardens. Recipients might include: local produce stand vendors; companies producing value added products such as mango salsa; vegetarian / raw / vegan catering company being able to retain a permit to use a residential property for the business.

### **Best Practices Implemented in Other Jurisdictions**

- Lake Worth has instituted a community garden at one of its parks. ([Click Here](#))
- Delray Beach has instituted a community garden at one of its parks. ([Click Here](#))
- [Click Here](#) for the American Community Gardening Association that has extensive information and location of gardens.

### **Recommendation 3: Develop and Implement Incentive Programs for Xeriscaping and Permaculture**

(Please [Click Here](#) for information on xeriscaping and [Click Here](#) for information on permaculture).

#### **Context**

- Residential and commercial landscaping consumes huge amounts of water.
- South Florida, including Palm Beach County, has been struggling with water shortages and subsequent restrictions for years, and this is not projected to change.

#### **Intent**

To reduce the strain on County water supply and establish a sustainable eco-system.

#### **Implementation**

The Environmental Subcommittee is proposing a number of potential strategies for implementation including (but not limited to) the following:

Provide incentives. The listed components are not limited to the following:

- Develop incentive programs for:
  - Greywater Ruse
  - Rainwater harvesting
  - Use of drought resistant native plants and xeriscaping
- Develop a disincentive program for:
  - Use of traditional sod / grass

#### **Best Practices Implemented in Other Jurisdictions**

- The South Florida Water Management District has for many years now sought to promote xeriscaping. The SFWMD implemented a xeriscape incentive program in 1992 to work with local governments within its jurisdiction to promote and develop xeriscaping and xeriscaping ordinances. There is potential opportunity for the County to partner with SFWMD on this effort. ([Click Here](#))

- The State of Florida in its Code regarding municipalities notes the following:

**166.048 Conservation of water; Xeriscape.--**

(1)(a) The Legislature finds that Xeriscape contributes to the conservation of water. In an effort to meet the water needs of this state in a manner that will supply adequate and dependable supplies of water where needed, it is the intent of the Legislature that Xeriscape be an essential part of water conservation planning.

(b) "Xeriscape" or "Florida-friendly landscape" means quality landscapes that conserve water and protect the environment and are adaptable to local conditions and which are drought tolerant. The principles of Xeriscape include planning and design, appropriate choice of plants, soil analysis which may include the use of solid waste compost, practical use of turf, efficient irrigation, appropriate use of mulches, and proper maintenance.

(2) The governing body of each municipality shall consider enacting ordinances requiring the use of Xeriscape as a water conservation measure. If the governing body determines that Xeriscape would be of significant benefit as a water conservation measure relative to the cost to implement Xeriscape landscaping in its area of jurisdiction in the municipality, the board shall enact a Xeriscape ordinance. Further, the governing body shall consider promoting Xeriscape as a water conservation measure by: using Xeriscape in, around, or near facilities, parks, and other common areas under its jurisdiction which are landscaped after the effective date of this act; providing public education on Xeriscape, its uses as a water conservation tool, and its long-term cost-effectiveness; and offering incentives to local residents and businesses to implement Xeriscape landscaping.

(3) A deed restriction or covenant entered after October 1, 2001, or local government ordinance may not prohibit any property owner from implementing Xeriscape or Florida-friendly landscape on his or her land.

([Click Here](#) for more information)

- The State of Arizona has a greywater ordinance in place to permit and promote greywater use. ([Click Here](#))
- The Florida Native Plant Society has created an extensive document, the Model Native Plant Landscape Ordinance Handbook, to help Florida municipalities create such legislation. ([Click Here](#))

## **ADDITIONAL TOPICS AND IDEAS FROM THE ENVIRONMENT SUBCOMMITTEE**

In addition to the three recommendations noted above, the Environment Subcommittee discussed the following other topics and recommendations:

- Promoting and developing incentives for private developers to use the LEED for Neighborhoods principles & certification that incorporate many concepts such as those developed in: Sustainable Urbanism, the Congress for the New Urbanism, and Urban Design with Nature.
- Developing Incentives for the development / redevelopment (utilizing sustainable design/construction practices) of the East of Military Trail as Urban Development Boundary
- Noting that Palm Beach County ranks 6<sup>th</sup> in the nation in suburban sprawl (according to the Palm Beach Post, 10/18/2002), West of Military Trail, increase impact fees for infrastructure such as Public Transportation routes, Agricultural land, Water Reuse, Rainwater Harvesting, etc. in order to reduce the Environmental Impact by reducing suburban sprawl.
- Implement requirements such that tree canopy is no less than 30%-50% (meaning that 30 to 50% of the land needs to be under tree canopy) in the Urban development/redevelopment areas and with technical approval from Urban Forester and Environmental Resource Management concerning removal/placement of trees, vegetation in areas of proposed development / redevelopment. Review current requirements, and work to increase the overall level of trees, and of that, increase the percentage of those that are native trees. See Lake Worth Tree Board Ordinances and American Forestry Report for Palm Beach County. A Tree Advisory Board was discussed as a valuable tool for best management practices. Some jurisdictions, such as Lake Worth and Sarasota, have such Tree Boards.
- Local Living/Closed Circle Economy/Zero Waste System best practices (ie. Production and access to goods and services within 100 mile radius, reduction/elimination of waste going to landfill, biodegradable products self-contained within residences or nearby location within walking distance)
- Requiring the location of any new construction/retrofitting within pedestrian access to Public Transportation that serves all Palm Beach County/Public/Essential facilities.
- There appears to be great potential for different types of renewable energy. One participant noted that according to some reports there is 12 million gals of recycled vegetable oil that is primarily used for soap. A focused study of the renewable / alternative energy opportunities in the County could be of great value.



## CHAPTER 8: EDUCATION SUBCOMMITTEE RECOMMENDATIONS

The Education Subcommittee focused on opportunities to promote sustainability in Palm Beach County, and to educate people on how to make their everyday lives greener.

### RECOMMENDATIONS

#### **Recommendation 1: Fund and Help to Organize the Annual Green, Energy, and Climate Conference / Expo**

##### **Context**

- The County currently has essentially no formalized green outreach effort, or effort to promote green businesses and growth in the “green collar job” sector.
- The 2009 Green, Energy, and Climate Conference / Expo was held in March at the Palm Beach County Convention Center in West Palm Beach.
- The County contributed funding and organizing efforts to this conference. There is an opportunity to participate in the future as this event grows and gains momentum.
- Green conferences and expos are now being held in communities throughout the country as an important piece to promoting green businesses and economic development locally.

##### **Intent**

To promote green business and lifestyle, while also growing the green job sector.

##### **Implementation**

- Contribute funding as a sponsor of the Conference in future years.
- Have a County representative serve on the Steering Committee for the conference.

##### **Best Practices Implemented in Other Jurisdictions**

- Sarasota County hosts an annual Sustainability Communities workshop. ([Click Here](#))
- Both Miami Dade County and the City of Miami provided sponsorship for the 2009 Mia Green conference in Miami. ([Click Here](#))

## **Recommendation 2: Develop and Maintain a Permanent Green Column on the Palm Beach County Government Website**

### **Context**

- The County has no formalized mechanism for communicating to constituents its own green activities.
- The County has no program for promoting green lifestyle, business, etc.
- The County has no way to promote or support green businesses in the County.

### **Intent**

To provide a single resource for residents to learn about County green efforts, green policies that affect them, and other green living and economic development resources.

### **Implementation**

Such a web resource might include links to and information about:

- PBC School District,
- PBCC, FAU, other Educational institutions,
- Community Gardens w/ maps/contact people,
- Chambers of Commerce in all cities,
- Service Organizations,
- All non-profits,
- Business Development,
- League of Cities,
- Residential Associations,
- Senior groups,
- Multicultural organizations,
- Moms Clubs,
- Eco Artists,
- Houses of Worship—churches, synagogues, mosques, temples, etc.,
- Other Artists, Writers, Performers, Musicians,
- Scientific Community,
- Agriculture,
- Horticulture,
- Tourism and Visitors Bureau,
- Real Estate,
- And others.....

These community links could be permanently on this column as an easy to find resource for all things Green/Sustainable for newcomers, permanent residents, and tourists to learn about the green initiatives and community in Palm Beach County.

The County could have a Kickoff Media Event and invite the media, community constituents, government elected officials, staff, general public., etc. This could be advertised on Channel 20 and all forms of mass communication. The intent is that the level of publicity campaign could be on par with and modeled after the information campaigns for hurricane safety.

#### **Best Practices Implemented in Other Jurisdictions**

- Sarasota County hosts dedicated green page with tips for residents and businesses, as well as information on the County's activities. ([Click Here](#))
- The City of Miami hosts a very expansive green website. ([Click Here](#))
- The City of Boynton Beach has recently begun its "Go Green Boynton!" site. ([Click Here](#))

### **Recommendation 3: Establish Green Collar Economy Enterprise / Cultural Training Centers Throughout Palm Beach County**

#### **Context**

- The opportunity for green jobs is exploding, especially with initiatives from the Governor and State legislature, as well as the Federal Stimulus package
- There is currently no coordinated effort by the County to promote economic development in these areas in the County.
- The County Office of Economic Development has apparently done extensive work and drafted documents in this area, but nothing appears to have been implemented, and there appears to be a disconnect between various County departments exploring these issues.

#### **Intent**

To promote green job growth, especially for the at-risk / low-income community.

#### **Implementation**

The County could develop a program to first, identify what jobs will be needed in this growing sector, and second, develop training programs. This could be implemented especially in at-risk areas such as Pahokee, Riviera Beach and Boynton Beach, and it could utilize contaminated and/or historic buildings (such as old Boynton Beach High School) for hands on training in remediation and retrofitting the structures.

This could be open to everyone, but have an emphasis on returning veterans, released prisoners, At-Risk youth, and unemployed workers. Education provided by experts in their fields such as Green Engineers, LEED Contractors, Architects, Artists, Business, Chefs, Farmers, etc.

#### **Best Practices Implemented in Other Jurisdictions**

- The White House has recently appointed community leader Van Jones the Special Advisor for Green Jobs, Enterprise and Innovation. He has worked extensively in the area of green

jobs and authored the *Green Collar Economy*. ([Click Here](#) for more information and [Here](#) for an additional article on the promotion of the growth of the green jobs)

## **ADDITIONAL TOPICS AND IDEAS FROM THE EDUCATION SUBCOMMITTEE**

- Development and Enhancement of Eco Tourism Sites and Historic Preservation/Archaeological Significance Sites. Palm Beach County has over 180 Archaeological sites that could be in danger of looting or environmental degradation. The sites serve as Educational/Economic opportunities for Eco-Tourism and Environmental Studies. Some sites are located in the Conservation Areas and must be maintained. References: Archaeological Survey of Palm Beach County Report--November 16, 2004
- Utilizing Eco Art as an Educational Vehicle ([Click Here](#))
- Implementing an Ongoing Comprehensive Outreach Program to engage and inform Palm Beach County citizens regarding Sustainability along with strategies for making permanent lifestyle changes -- utilizing Public Affairs, Public Information Officers, Tabling at Events, Speakers Bureau, Media and other community resources/ activities